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ABSTRACT

This study investigated the importance and meaning of the role of observation in teachers' assessment of student achievement. Seven questions were used as a guide by the researchers: 1) What do teachers mean when they rate observation as their most important source of information for assessing student achievement? 2) What role do teachers' expectations play in evaluating and interpreting information obtained by observation? 3) Do teachers' practices stem from identifiable concepts of child development or curriculum? 4) What is the quality of information gained from observation? 5) Are different strategies of student evaluation used by teachers? 6) Do practices vary with grade level?, and 7) How is evaluative information integrated and reported? Results of interviews, questionnaires, and classroom observation of primary and junior level teachers are reported and analyzed. (JD)

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TEACHER INTERACTION AND OBSERVATION PRACTICES IN THE EVALUATION OF STUDENT ACHIEVEMENT

J. W. FAIR, Principal Investigator

A. J. BIEMILLER
M. F. GRAPKO
G. W. HUNT
R. A. MARTIN
K. R. MOCK
R. PIKE
A. T. SHEEHAN
R. J. VOLPE
J. D. WOOD

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Hon. Bette Stephenson, M.D., Minister
Dr. H. K. Fisher, Deputy Minister

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Foreword

In August, 1977 the Ministry of Education for the Province of Ontario awarded to a team of ten staff members of the Faculty of Education, University of Toronto a contract to determine what teachers mean when they rate "observation" as the most important source of information for assessing student achievement.

The following is a list of the team members who together were responsible for every stage of the project. Readers of this report are invited to direct comments and questions to any member of the group on any aspect of the study. If, however, more detailed discussions about specific material contained in individual chapters are required, contacting those who assumed the final responsibility for writing our findings might be more profitable. Consequently, after each team member's name and present location are listed the chapters for which that person had a major final responsibility.

J.W. Fair - Professor and Co-Coordinator, Department of Elementary Education, Faculty of Education, University of Toronto. (chapter 4)

A.J. Biemiller - Associate Professor, Institute of Child Study, Faculty of Education, University of Toronto. (chapter 5)

M.F. Grapko - Professor and Director, Institute of Child Study, Faculty of Education, University of Toronto. (chapter 5)

G.W. Hunt - Associate Professor and Co-Coordinator, Department of Elementary Education, Faculty of Education, University of Toronto. (chapter 4)

R.A. Martin - Associate Professor, Department of Educational Administration, Faculty of Education, University of Toronto. (chapters 3, 8)

K.R. Mock - Educational Psychologist, Early Childhood Education, Ryerson Polytechnical Institute. (chapters 4, 7)

R. Pike - Associate Professor, Institute of Child Study, Faculty of Education, University of Toronto. (chapters 3, 8, 9)

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A.T. Sheehan	- Professor, Department of Educational Administration, Faculty of Education, University of Toronto. (chapter 3)
R.J. Volpe	- Associate Professor, Institute of Child Study, Faculty of Education, University of Toronto. (chapters 2, 8)
J.D. Wood	- Associate Professor and Chairman, Department of Educational Administration, Faculty of Education, University of Toronto. (chapter 6)

Acknowledgments

This study was completed with the assistance of many people and to them our team expresses their sincere appreciation.

A special word of thanks is extended to the children, principals, supervisory officers, and especially the thirty-six teachers who cooperated so willingly in our study, for without them this undertaking would not have been possible.

The team also expresses its gratitude to the efforts of Barbara Brodie, who typed the numerous drafts of the report, and Hazel Ross, who had the unenviable job of editing the work of ten authors.

Abstract

The purpose of this study was to examine the nature of teacher interaction and observation practices in the evaluation of student achievement. A phenomenological approach based on a series of in-depth interviews and other strategies was employed with a sample of thirty-six elementary school teachers. It was a pilot project undertaken to provide some initial insights into questions arising out of previous research. By discussing these issues directly with the teachers themselves, the research team hoped not merely to answer the questions posed by the Ministry of Education but rather to clarify the issues and to generate additional questions and hypotheses on which to base future research.

The questions which defined the scope of the study were as follows:

- -What do teachers mean when they rate observation as the most important source of information for assessing student achievement?
- -What role do teachers' expectations of achievement play in decisions on what to evaluate and how to interpret this information?
- -What can be said about the quality and coverage of such information?
- -How is all evaluative information integrated and reported?
- -Might there be different strategies of evaluation that identify groups of teachers?
- -How do practices vary with grade level?
- -Do teacher assessment practices stem from identifiable concepts of child development or curriculum?

The prime focus of the entire study was the examination of the importance and the meaning of the role of observation in teachers' assessment of children.

Teachers report that observation is a very important source of information. However, the degree of importance varies with the nature of the information being collected. When teachers were asked to name the most important source of information for "getting to know your pupils," observation

was mentioned most frequently. When asked about "evaluating pupil achievement," daily work was cited more often than observation as the most important source of information.

The study showed that the influence of teacher expectations is manifest at several steps of the evaluative process. Teachers seem to construct practical theories about classrooms and children and these theories or expectations direct the teachers' actions and allow them to make sense of their experience. Classroom procedures are designed to ensure the availability of information necessary but at the same time these procedures may preclude the gathering of other sorts of information.

Teachers also have theories about the nature of children in general and these theories affect their treatment of particular children. It was seen that expectations play a large role in how information about the child is interpreted. Examination of teachers' estimates of children's performance on standardized tests indicated considerable variability in the accuracy of predictions. In most classes, some children were under- or overestimated by a substantial amount. Most teachers overestimate the relationship between children's performance in different areas of achievement. Evaluative procedures which produce estimates congruent with teachers' expectations are accepted rather indiscriminantly while those which contradicted expectations are dismissed as inaccurate or inappropriate. The products of daily work and tests which confirm the teacher's belief are accepted at face value, while products which contradict the prevailing belief necessitate further consideration on the part of the teacher.

Reporting practices are also affected by teachers' expectations and vary, depending on both grade level and board policy. Neither letter grade nor written or verbal anecdotal reporting necessarily mirrors test scores in a precise way. It appears that it is the teacher's perception that tends to be reported, not test scores, unless the two agree. The coverage of evaluative information in the academic areas appears to be substantial and the quality of the information shows the teachers are more confident in these areas.

This study found some notable differences between primary and junior teachers. In part they differ from each other with respect to what they want to know about children. This difference carries over to their information-gathering activities and to the contexts in which the activities occur. Primary teachers mentioned observation by watching and direct instruction more frequently than junior teachers. Junior teachers

mentioned observation by managing learning more frequently than primary teachers. There is a greater use of teacher-made tests in the junior divisions, and, not surprisingly, they are considered a more important source of information on pupil achievement by junior teachers than by primary teachers.

All teachers have notions of the sequence of learning tasks that children should complete during the school year. Children are judged as advanced, average, or low depending on how well they were able to complete these tasks. Thus, there is apparently some implicit normative standard with respect to these tasks. It may be that the comparative labels placed on the child as a result of curriculum achievements carry over and are interpreted as descriptors of general development. Some teachers appear to form more complex tightly integrated evaluations of children than others do. Their evaluations are based not only on actual achievement but also on developmental dimensions. These teachers seemed to look at "the whole child" and described how the child is achieving in developmental rather than academic terms.

There are three major implications suggested by the results of this study. First, that teachers be better prepared to handle the complexities of the evaluation process. This could be accomplished through both pre-service and in-service training. Second, that school practices be examined and appropriately modified to encourage more effective evaluation procedures to be developed. Third, that efforts be made to show parents the real nature of the evaluative process. The public must be helped to appreciate that evaluation does include intuition, expectations, and inexplicit criteria employed in conjunction with tests and other more structured exercises.

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1 Introduction

In recent years, governments, educators, and the general public have been concerned with the issue of accountability in education. Educational accountability is related to the imperatives that

- -children learn while in school,
- -resources for education be used effectively and efficiently, and
- -educators and other concerned members of the public be informed of children's progress in school.

To meet these imperatives it is necessary that the achievements of students be evaluated and reported. The project described in this report aimed to facilitate evaluation in education by examining the nature of teacher-student interaction and teacher observation practices as related to the evaluation of student achievement.

A team of researchers at the Faculty of Education, University of Toronto conducted the study while under contract to the Ministry of Education for the Province of Ontario. Members of the team were drawn from several departments within the Faculty of Education including Child Study, Psychology, Educational Administration, and Elementary Education.

Scope of the Study

The call for tenders issued by the Ministry of Education

contained a list of questions to guide the research.

1. What do teachers mean when they rate observation as the most important source of information for assessing student achievement?

2. What role do teachers' expectations of achievement play in decisions on what to evaluate and how to interpret the information?

3. Do teachers' practices stem from identifiable concepts of child development or curriculum?

4. What can be said about the quality and coverage of such information?

5. Might there be different strategies of evaluation that identify groups of teachers?

6. How do practices vary with grade level--or do they?

7. How is all evaluative information integrated and reported?

The goal of the project as interpreted by the researchers was not to find final answers to these questions, but rather to clarify issues raised by the questions and to generate further questions and hypotheses for future research.

Design of the Project

The rationale for the project's design is that a phenomenon such as teacher interaction and observation is best understood by examining it from as many viewpoints as possible. Therefore, the research team proposed to study the evaluation procedures of teachers by using a battery of strategies including:

1. An in-depth interview in which teachers talk.

about the characteristics and achievements of their students.

2. An interview in which teachers talk about the information they desire when a student transfers to their classroom.

3. A questionnaire survey to determine what information teachers collect, record, and report.

4. An interview to determine how teachers learn about the achievements of individual children.

5. The collection of a sample of students' work to be analysed in discussion with the teacher concerned.

6. The completion by teachers of an exercise in estimating the achievement of their students on a standardized achievement test.

7. Classroom observation of teachers' behaviour that may be related to the observation and evaluation of student achievement.

There were two major advantages in using a battery of strategies. First, it provided data in a variety of forms. This was essential to developing an understanding of the phenomenon of interaction, observation, and assessment. Second, the use of a battery of strategies provided a way of validating the meanings that teachers ascribe to the phenomenon. For example, it was possible to compare the contents of the interviews with the comments teachers make about the collection samples of students' work.

While the proposed research strategies overlapped, to some degree, the various issues of evaluation under consideration, the research team felt that certain strategies spoke more directly to some of the seven questions in the Ministry's

tender than did other strategies. Figure 1 shows how the strategies were to contribute to answering the seven questions outlined in the scope of the tender.

Figure 1 should be interpreted as follows. The research team believed, for example, that the in-depth interview would provide data that could be used in answering questions 1 and 3 to 7 inclusive; that the collection and analysis of student work would provide data that could be used in answering questions 1, 2, 4, and 7, and so on. It should be noted that each question was to be considered in light of data collected in more than one format, and that the findings from one strategy could be compared with the findings of one or more other strategies. Examining the questions from several viewpoints would lead to a list of tentative hypotheses of value in guiding further research and development on the evaluation of student achievement.

Research Strategies for the Project

This section presents descriptions of the procedures involved in each of the research strategies.

1. In-depth interview about four children.

Each teacher was interviewed for approximately one hour at a convenient time when the teacher was not teaching (after school, noon hour, in the evening). All teachers agreed that the interviews could be tape recorded.

Figure 1
Research Strategies

Research Questions (Ministry Tender, Scope of study)	1 Interview about four children in your classroom	2 Interview about a transferred pupil	3 Questionnaire about information	4 Interview about individual achievement	5 Collection & analysis of student work	6 Estimation of achievement exercise	7 Classroom Observation
1. means when they rate observation	X		X	X	X		X
2. expectations of achievement		X		X	X	X	
3. practices stem from identifiable concepts of child development	X	X					X
4. quality and coverage of information	X			X	X		
5. different strategies of evaluation	X		X				X
6. practices vary with grade level	X	X	X				X
7. how is evaluation information integrated & reported	X			X	X	X	

After establishing a friendly atmosphere, the interviewer turned on the tape recorder and said,

> "As you know we are interested in how and what teachers do to get to know their children. To help us begin to get at this question I would like you to tell me about a few of the children in your class. More specifically our study is based on the discussion of four of your children. To get us started let's consider a child who you consider to be average, normal, or typical for this particular grade level.
>
> "Let's suppose that you are to be absent from school for the next month to attend a course and I am to take over your class for that period. What can you tell me about--(the first child selected) so I will be able to effectively carry on for you for the next month.
>
> "As you tell me things I'll write them down."

After describing the first child the teacher was asked to select a second typical or average child but of the opposite sex. For the third child the teacher selected a "low achiever" and for the fourth child a "high achiever."

In the second phase of the interview, the researcher returned to the first item about the first child.

"You mentioned that Billy was _____. How do you know that?"

The interviewer wrote down what the teacher said. Each item for each of the four children was discussed in turn.

In the third phase of the interview the researcher said,

> "You have mentioned several sources of information on the children in your class, such as--(the interviewer read several examples from his notes). Which of these sources do you feel is most important and helpful to you in learning about your children?"

Once the teacher had responded, the researcher asked the final question of the interview.

> "Is there any type of information you do not have but would like?"

2. Interview about "a child transferring to your class."

The interview was divided into four phases. The researchers began the first phase by saying,

> "Suppose I am a teacher from another district and one of the children in my class will be transferring to your class. Is there anything you would want to know from me, before the child shows up?"

When the teachers had made their comments, the researchers initiated the second phase of the interview by returning to the first item in the teachers' responses and saying,

> "Let's go back a bit now. You mentioned that you would want to know_____. Why would you want to know that?"

The same question was posed for each of the responses to the first-phase question.

The third phase of the interview was initiated with the question,

> "Is there anything you would want to know but would rather find out for yourself?"

In the fourth and final phase of the interview the researcher returned to each of the teachers' Phase 3 responses and said,

> "You mentioned that you would like to know_____ but you'd rather find out about it yourself. Why is that?"

3. Questionnaire survey about the information teachers

collect, record, and report.

In this research strategy, interviewers used a list of questions to ask teachers about collecting, recording, and reporting information that describes pupils.

Collecting:

"What information about children do you collect?"
"How do you obtain this information?"
"Why do you collect the information?"

Recording:

"How do you record the information you collect?"
"How often do you record the information?"
"Do you have a sample or description of the record's format?"

Reporting:

"To whom do you report?"
"What information do you report?"
"When do you report?"
"What form does the reporting take?"
"Do you have a sample of the reporting format?"

The interviewers wrote down the teachers' responses, and collected samples of record and report forms where available.

4. Interview to determine how teachers learn about the achievement of individual children.

The interviewers began by saying,

"Today I'd like to find out from you what you feel are the most important ways that you get to know about the achievement of individual children in your class."

At appropriate times during the teachers' responses, interviewers probed by asking questions such as,

"Can you elaborate on that?" or "What do you mean by . . .?"

After the interview, the researchers reviewed the tape recording and their own notes. Then they wrote down their hunches as to what the teachers attend to, how they attend to it, and how they give meaning to the objects and events of their attention.

5. Collection and analysis of student work.

When the researchers visited the teachers to discuss the collecting and reporting of information, they initiated the fifth strategy in the project by saying,

> "In our first interview we talked about four children, _____, _____, _____, and _____. When I return next time I'd like to talk again about those children. Specifically I'm interested in discussing with you the products that these four children daily produce and what these products mean to you. To assist our discussion would you collect for us, over the next six weeks, examples of each of these children's work you normally look at which indicate to you how the child is doing.
>
> "I have boxes here, one for each child."

Together the researchers and teachers constructed the boxes and wrote each child's name on a box. Teachers were asked to "date each piece of work you collect before placing it in the box."

Approximately six weeks later the researchers and teachers met to discuss the collections. The work of one child was laid out on a table and the teacher was asked,

> "What does all this tell you about how (child's name) is doing?"

Then the researchers asked the teachers to comment on the

meaning of each piece of work. Each child's work was dealt with in turn.

The discussions about the collections of work were tape recorded and written summaries of teachers' comments were prepared under two headings,

1. What does the item of work tell you?
2. How do you use the information obtained by looking at the work?

6. Exercise in estimating student achievement on tests.

Having completed the discussion on the collection of student work, the researchers explained that the next visits would involve the administration of two achievement tests. The teachers were asked to choose two sub-scales from the Metropolitan Achievement Tests for their grade level. One test was from the reading-language area and the other was from the mathematics-quantitative area. The tests were to be administered by project research assistants.

Because parental consent was required, the researchers, the teacher, and the principal were involved in drafting a parental permission form to be sent home with each child. A date was selected for administering the test.

When the researcher and the research assistant returned to the school, the researcher asked the teacher to examine each test item carefully and estimate how many items in each sub-scale each child would answer correctly. The tests were

then administered to the children by the research assistant.

In the final visit, test results showing the actual number of items each child answered correctly were shown to the teacher along with the teacher's estimated scores. Teachers' comments concerning the achievement of their pupils and the similarities and differences between the estimated and actual achievement scores were again recorded.

7. Classroom observation.

Entry to a classroom in three of the schools participating in the study was sought by informing the principals and the teachers as to the intent and nature of this unique portion of the study. During the months of April, May, and June, a participant observer was assigned to a classroom in each of the three schools and spent two or more full days a week in the school, for a total of at least thirty schooldays per classroom.

Only the general question of how teachers differentiate among students in terms of their present competency and potential achievement guided the observer. The observer did not have access to the data or materials derived from the major proposed study. The investigator, trained in qualitative methods, attempted to learn the culture of the school and the language of the involved teachers. The words and symbols in this setting could not be assumed to be equivalent to those of the researcher. Moreover, observation of the way teachers make sense out of the differentiation process had to be set

in the context of the entire school situation including students, teachers, and administrators.

Recordings of field notes were made in private on a tape recorder during and after observation periods. Descriptions and interpretations of events in the setting were made by the observers.

The observers' analysis involved the identification of themes, patterns, and generalizations that emerged from the data. This form of analysis aimed to produce an understanding of how teachers differentiated among students.

Implementation of the Project

Staging of the Research Strategies

The research strategies were put into effect during one school year. The sequence and times of the strategies were as follows:

- In-depth interview about four children (Visit 1, October)
- Interview about a transferred child (Visit 2, November)
- Questionnaire survey on collecting, recording, reporting (Visit 3, January)
- Interview on how teachers learn about the achievement of individual children (Visit 3, January)
- Collection and analysis of student work (Visit 4, May)
- Estimate of achievement exercise (Visit 5 and 6, May)
- Classroom observation (April, May, June)

Each member of the research team participated in each of the first six research strategies. A smaller group of three team members conducted the seventh strategy, classroom observation.

Participants

Thirty-six teachers were selected for the study on the following basis. Two teachers, one from each division (primary and junior) volunteered from 18 selected schools. It was proposed that two boards of education be approached who, together, would provide a range of inner city, suburban, and rural schools. Team members then approached the research officer in each board and, after approval for the study had been granted, had them select the schools. We attempted to construct the following mix:

6 inner city schools	= 12 teachers	= 6 primary and	6 junior
6 suburban schools	= 12 teachers	= 6 primary and	6 junior
6 rural schools	= 12 teachers	= 6 primary and	6 junior
18 schools	= 36 teachers	= 18 primary and	18 junior.

After a telephone call to the principal, a letter was sent to him/her and to each of the school teachers explaining the study and asking to meet with interested staff members. At the meeting further details were given and the teachers were asked to volunteer. One primary teacher and one junior teacher were selected by drawing names out of a hat. Thus we identified a population of teachers who were interested and informed, yet the final sample was chosen randomly. Because of the rather close working relationship needed over the year only teachers interested in the study were considered for selection.

All teachers involved in the study were informed of

every aspect which related to them. They were told in advance of the purpose and methods to be used. The team expected considerable teacher input as the project developed.

Certain descriptive information on each of the teachers was collected. Items such as sex, number of years teaching experience, educational background, etc., were recorded. Confidentiality and anonymity of the teachers were maintained.

Organization of the Report

The project is described and discussed in the eight chapters (and five appendices) which follow this introductory chapter. Chapter 2 deals with background and related readings. The six central chapters present and discuss the findings from the research strategies. The final chapter discusses the project as a whole and draws out implications for research and practice in education.

Each chapter is written as a narrative with references to related data tables presented in the appendices. This organization enables readers to 1) read the chapters to learn about the methodologies and findings, and 2) study the appendices to gain an in-depth understanding of the data and to assess their own hypotheses about teacher observation and student achievement.

2 Background and Related Studies

The sources of information that teachers employ to assess student achievement are complex and diverse. Among them are the central concerns of this study--teacher-student interaction and teachers' observation practices.

The ways teachers perceive student characteristics appear to influence how they relate to their students (Brophy & Good, 1974), and these interaction patterns apparently have a major influence on school performance (Rosenthal & Jacobson, 1968; Elashoff & Snow, 1971). In a student's early life few people, other than parents, are more important than teachers. Teachers influence a student's present and future sense of well being because classroom life affects the development of self-esteem (Purkey, 1970; Covington & Berry, 1976). Thus, it is not only the immediate effect of student-teacher interaction and teacher observation practices on the process of evaluation that makes its study important.

Although there has been a tendency to study the teacher-student relationship apart from general social, psychological investigation of interpersonal relationships, the analysis of teacher-student interaction and of teacher observation practices may benefit from consideration of the general way people perceive one another.

From the study of perception and attribution processes certain tentative conclusions about how impressions are formed may be derived. On the basis of general research in perception it is likely that certain similarities exist in the way people experience the physical and social world. Structure, stability, and meaning are attributed to the world by the perceiver, not through a passive translation of stimuli, physical energies, or personality characteristics, but through a process involving the active participation of the perceiver. The perceiver selects, categorizes, interprets, and infers in order to create a meaningful world in which to act (Tagiuri, 1969).

The judgments involved in this process are never a matter of mere empirical input; they depend on existing cognitive organizations. The teacher's experience of students is assimilated by these structures. He or she, using cognitive organizations already developed, interacts with students and observes them for the purpose of evaluation. Change and development are elaborations of existing structures. Flexible, non-stereotypic understanding of pupils is related to a teacher's ability to make sense out of individual differences. Making sense out of experience involves reflective abstraction and conceptualization of interpersonal relations. These abilities are the tools that help all of us make experi

ence meaningful and are an outcome of the interaction between conceptualization and activity (Volpe, 1975; 1978).

Heider (1957) and Kelly (1955) have drawn attention to the powerful and pervasive influences of the residues of human experience that form the naive psychologies and personal constructs by which people make sense out of their lives. Teachers employ these practical theories to summarize, categorize, and interpret the vast array of situations and observations that comprise the practice of teaching. These practical theories often operate subtly and unknowingly to shape practice (Volpe, 1976a). Moreover, they help teachers make meaningful what is happening while they are influencing and being influenced in the classroom.

The subsequent selected literature review focusses on a number of studies that investigate the practical theories used by teachers to evaluate the present and potential achievement of students. Some of the categories used by teachers to sort, label, and assess the competencies of students will be made explicit during the discussion. The assumption is made that practical theories are applied to all aspects of information about students; that is, to background characteristics, test scores, appearance, personality, and behaviour.

Relevant Literature

One important aspect of the way people come to know

others is the development of behavioural expectations. One of the early studies of this process in an educational setting was Rosenthal and Jacobsen's (1968) investigation of the self-fulfilling prophecy. They tried to determine whether children's performance would improve if it were predicted that improvement would take place. The pupils of an elementary school were given a disguised IQ test. Their teachers were told that the test could single out those students who could be expected to make dramatic academic progress. Twenty percent of the pupils were then randomly selected to be reported as potential late bloomers. All the children were later retested and the designated late bloomers were found to have obtained a significant increase in IQ scores. Although the subsequent failure of replication efforts (Claiborn, 1969) and various methodological criticisms (Snow, 1969; Taylor, 1979) make it difficult to consider this research unequivocal, it does suggest that self-fulfilling prophecy may operate in educational environments. Moreover, the investigation indicates the potential importance of understanding the cognitive maps employed by teachers to organize their experience of students.

A number of studies have recorded the determining impact of routine labelling of students by teachers (Holt, 1964; Kozol, 1967; Kohl, 1968). Perhaps most dramatic is the finding by Rist (1973) that after the first five days of

kindergarten teachers divided children into ability groups on the basis of previous records, data from a questionnaire completed by parents, lists of welfare recipients, gossip, and reports from other teachers. No test data on language skills, intelligence, or special talents were available. The most salient criteria for dividing the children into high, medium, and low ability groups according to Rist were clothing, physical appearance, body odour, peer interaction, relationship with teachers, and use of standard American English. This information and what was known about the child's family and social class enabled the teacher to confidently sort these children into supposedly homogeneous ability groups. Rist further reported that these groups persisted and took on increased objectivity throughout the children's careers in elementary school.

In a classic observation study Jackson (1968) described evaluation procedures in one school as based on test scores, daily performance, level of motivation, and characteristic personality traits. Because of the nature of some of these fleeting cues they were made manageable by using such crude classifications as dull, average, and bright.

Jackson characterized what he called the conceptual simplicity of teachers in terms of an uncomplicated view of causality and an intuitive, rather than rational, approach to classroom events. Moreover, he observed that teachers

took an opinionated, as opposed to an open-minded, stance concerning teaching alternatives. He strongly suggested that these features of a teacher's perspectives may be a necessary condition for effective classroom functioning.

Similarly, Leiter (1974) observed that implicit practical theories have an impact on promotional decisions made by teachers and administrators. In one school children were divided into three groups--strong, average, and weak--according to how they adapted to the school routines. The conceptual ingredients in these categories were labels such as lazy, immature, bright, slow, and troublemaker. Leiter reports that promotional decisions were rationalized by the generation of the following classification scheme:

> a. Immature child--distractable; impulsive, short attention span; boys more likely than girls; smaller more likely than average or large children. b. Bright child--learns quickly, good verbal skills; demands little attention, considered bright by other teachers. c. Behaviour problem--large boy who fights for no apparent reason. d. Independent worker--works with little supervision and finishes tasks before others.

When related to the age of the child this classification helped the teachers and administrators determine the readiness of a child to pass from kindergarten to grade 1.

An interesting contrast between student sorting in an American and a British secondary school emerges from the reports of Circourel and Kituse (1963) on an American school and Lacey (1970), who studied a British school. These differ-

ences are not to be taken as general characteristics of the sorting process of these countries. Rather they are in-depth descriptions that may provide useful insight into some of the major features of a school system that can influence the process of differentiating students. The following factors appear in both schools to influence teachers in their sorting of students: student background characteristics, home/school relations, and guidance and counselling.

In the British grammar school studied it was the nature of incoming attributes which got students admitted to the school. Only pupils with similar academic records get into the program. In the American school social typing, derived from prior biographies, determined entry. Testing shortly after school began was the basis for academic differentiation.

Parents in both schools applied similar pressures. The teachers additionally met with parents and informed them of their children's academic progress. Parents also informed the teachers of the direction they should like the school to take in their children's education. The schools also provided parents with new ways of looking at their children and ways to improve their behaviour. Moreover, the parents in both schools pressured teachers to guide their offspring along similar career lines.

Testing throughout the school year led to increased

social polarization of students based on refinements in academic differentiation. Although academic performance counted highly, certain non-academic activities were also found to be important. Lacey noted that in the British school differentiations of pupils in the minds of teachers related to academic performance and behaviour, which were seen as interdependent. That is, success in the school's academic programs was closely associated with conformity to accepted norms. In contrast, the personnel of the American school only mentioned behaviour in cases of obvious delinquency.

The greatest contrast in approach to differentiation between these schools was reported in the non-academic area. In the British school differentiation was reported to be based on "the multiple set of criteria which teachers use in the normal course of their duties" or "those intangibles well known to the experienced teacher." Lacey treats this major feature of pupil sorting as unproblematic--he takes it for granted. Circourel and Kituse in contrast draw attention to these intangible aspects of the process of differentiation.

This distinction becomes important in light of another difference in emphasis between the schools. Personnel of the British school, while they considered behaviour, appeared to focus almost solely on the academic. The American school espoused an emphasis on the "whole pupil." Students were

classified not only on an intelligent/stupid continuum, but also in terms of conformity/non-conformity.

The differences between these schools may result from the existence in the American school of a mental health/sickness dimension that gives rise to a clinical orientation among school personnel. It is interesting to note that in the British school counselling is done, not by a core of counsellors, but primarily by teachers. This may lead to student behaviour being assessed primarily in terms of academic performance.

The trend in Ontario and other parts of North America is to give lip service to concern for the whole child. The average classroom teacher is expected to provide for a variety of pupil needs. Thus, the interpretative rules employed by teachers in this context may be expected to go beyond a focus merely on academic performance. Later work by Circourel and associates (1974) has pursued the study of the intangible aspects of differentiation and revealed interpretative rules that help school personnel decide what behaviour can be defined as deviant or acceptable and what consequent actions are appropriate. These interpretative rules focus on a variety of things such as brightness-dullness, the tendency to conform, high and low motivation.

A number of relevant points emerge from the literature about the way people perceive the world. Most important is

the awareness that people (teachers) do not sit back and wait for the world to impinge on their consciousness. Rather, they try to interpret it, make sense of it. That is, they construe, grapple, and intellectually puzzle over it until it becomes meaningful. Generally, people, it seems, are questioners who entertain hypotheses and seek to check them out. These questions are directed both at the self and at others. While answering questions and exploring the world, people build conceptual models and generate systems of inner representations of experience that help them to anticipate and deal with events. Lest this discussion appear to portray people as overly reasonable and scientific in the enterprise of making sense out of experience, it must be noted that the level of sophistication possible in model-building is highly variable. The thinking of young children, adolescents, and adults with various experiential backgrounds reveals an extensive range of interpretive models (Volpe, 1976b). The point to emphasize is that, as is the case with all of us, teachers' existing organization of experience to a great extent filters new experience and limits the range of interpretation possible.

The following sections report one of the most extensive naturalistic studies undertaken to date of these processes in an educational context.

3 Teachers Talk About Pupils*

Talking to teachers about their pupils proved to be the key to the teachers' hidden treasure--a wealth of concepts about children, their learning, their potential, their achievements. The purpose of this chapter is to present and discuss what was discovered when teachers talked about pupils.

Procedures

Interview Strategies

Teachers were asked to discuss their pupils in one way during the first visit and in another during the second. In the first, they were asked to describe in detail selected children in their classes. In the next, they were asked to imagine that a child had been transferred to their classes and to centre their discussion on the hypothetical newcomer. The aim of the two procedures was to increase understanding of how teachers observe, describe, and think about children in different circumstances. Here these procedures are discussed under four headings: (A) interviewing teachers about pupils; (B) data analysis; (C) results; and (D) summary.

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*Corresponding data in the form of tables and lists of comments are presented in Appendix 1.

A. Interviewing Teachers about Pupils

In each of the two interviews teachers were asked to talk about particular children. Each time a child was discussed, teachers were asked to answer a question concerning the child under discussion and then to state reasons for their answers.

Visit 1: Tell Me about Four Children in Your Class

In the first visit the teachers were asked to identify and tell about four of the children they were teaching: (1) "any child you consider to be average, normal, or typical for this particular grade level"; (2) "an average child of the opposite sex"; (3) "the lowest academic achiever"; (4) "the highest academic achiever." For each pupil in turn, the teacher was asked to "tell me about" the child. The teachers were to imagine the interviewers as substitute teachers who were to take over their classes while the teachers were away on a month-long, professional-development course.

When a teacher had finished talking about the four children, the interviewer returned to the initial comment about the first child and asked: "How do you know that?" The same question was then asked for each of the teacher's remarks.

Visit 2: A Child Is Transferring to Your Class

The second interview consisted of two phases. Each

phase was based on two questions.

Phase 1: What do you want to know in advance? The interviewer began by saying, "Suppose I am a teacher from another district and one of the children in my class will be transferring to your class. Is there anything you would want to know from me, before the child shows up?"

When the teacher seemed to have exhausted his/her comments, the interviewer returned to the first item mentioned by the teacher and said, "Let's go back a bit now. You mentioned you would want to know _____. Why would you want to know that?" This question was repeated for each of the teacher's comments.

Phase 2: What do you want to find out for yourself? Next, the interviewer said, "Is there anything you want to know about but would rather find out for yourself?"

Again, once the teacher had commented, the interviewer returned to the first item mentioned and said, "You mentioned that you would like to know _____ but you'd rather find out about it yourself. Why is that?"

This question was repeated for each of the teacher's comments. In both procedures, teachers' remarks were tape-recorded and the interviewers made written notes. After a visit, the interviewer listened to the tape to make sure the written record was accurate and complete. The written records for all interviews in the first and second visits

were examined to identify categories for further analysis.

B. Data Analysis

The written records from a sample of interviews with teachers were analysed to identify categories of response. The analytical technique employed is known as the Constant Comparative Method (Glaser & Strauss, 1969). The researchers did not begin with any pre-test categories; rather, the categories emerged from the raw data during the process of analysis. The Constant Comparative Method consists of comparing the first two phrases of sentences given by a teacher during the interviews. Two categories are established if the phrases seem to refer to different things or events, only one category if the phrases refer to the same thing. Each subsequent phrase is then looked at in sequence and placed in a category or categories already established or in a new category. The complete transcripts of responses from one-sixth of the sample of teachers to five of the questions shown below were analysed to establish the categories shown in Appendix 1.

The categories generated by the data described in this chapter were then applied to the data from the procedures described in Chapters 4, 5, 6, and 8. The process from which the categories emerged, however, were used only once.

Separate analyses were undertaken of teachers' responses to five of the following questions:

1. Tell me about four of the children in your class.
2. How do you know that?
3. What do you want to know before the child arrives?
4. Why do you want to know that?
5. Is there anything you would want to know but would rather find out for yourself?
6. Why is that?

For question #3, a separate analysis was unnecessary as the categories identified for question #1 proved to be applicable.

Once the sets of categories were developed, the responses from all the interviews were grouped according to the categories. A system of code numbers was derived and each response was numbered to indicate the category to which it belonged. The full set of categorical definitions with examples of each type of response is presented in List A in Appendix 1.

C. Results

The teachers' responses fell into many different categories. They tended, however, to cluster with the majority of responses fitting into just a few of the possible categories. Only these areas have been singled out for discussion. The pattern of responses is presented separately for each pair of questions in Visit 1 and for the two pairs of questions in Visit 2. Appendix 1 contains three data tables which present a numerical breakdown of the frequencies of response types, one based on the question in Visit 1, and

one based on each of the pairs of questions in Phase 1 and Phase 2 of Visit 2.

Visit 1

Tell me about a few children in your class

Over half the responses referred either to Attitude, Effort, and Work Habits (that is, to the child as a learner in the classroom) or to the child's present level of Academic Achievement in specific skills or disciplines. Teachers spoke of a child's eagerness to learn: "She is always picking up a book and wanting to read it"; the quality of the child's effort: ". . . may rush and do inaccurate work"; the child's learning style: ". . . needs encouragement from the teacher as he is working"; and, the child's willingness to work for the teacher: ". . . can be trusted to work co-operatively in a group." The teachers' comments ranged over all subject disciplines. (See List A, I)

Teachers made about the same number of responses on each of Personal and Social Characteristics and Development. Some comments on interpersonal relationships were: "Happy-go-lucky" or "Blames the problems he creates on others." (See List A, III) In the second visit, teachers described children's rate or level of development: "Smallest in the class," 'Progressing much more quickly now than in the fall." (See List A, IV)

A small proportion of the responses referred to the child's home Background and how it related to school

attendance and performance, for example, "Father knows about trucks; therefore, Vincent knows about trucks," or "Father had a heart attack recently and Barbara has been absent a great deal." (See List A, V)

Primary and junior teachers provided a similar number of academically oriented responses.

How teachers learn what they know about children

Both junior and primary teachers learned most of what they were able to tell about their students by watching them without intervening in their activities. (See Appendix 1, Table 1) This is true of everything except Background information. While many comments included such words as watching, listening, and observing, it should be noted that primary teachers mention "watching" even more frequently than do junior teachers.

A substantial amount of information is gained about Academic Achievement in those situations in which teachers take deliberate steps to ensure that pupils are learning or when direct instruction by the teacher is under way. Teachers often prefaced their remarks with: "When I teach . . .," "When giving instructions . . .," "What I am looking for . . ." or "In checking daily work . . .."

Additional information is gathered while work is going on in the classroom and the teacher is supervising, checking for accuracy or completeness, or testing to determine level

of achievement. Nearly twice as many junior teachers employ this strategy as do primary teachers. Some teachers at both levels also collect information outside the classroom during student-initiated interaction or on special occasions.

Visit 2

Phase 1: What teachers want to know about incoming students

More than other information, these teachers want to know about Academic Achievement and Attitudes, Effort, and Work Habits, the former accounting for nearly half the total responses. A large percentage of teachers, but especially junior teachers, are interested in learning about Personal and Social Characteristics. They request some information about Background but relatively little about Development. In this interview, the primary teacher generally tended to emphasize specific kinds of information which they preferred to find out personally while the junior teacher, responding in more general statements, emphasized "wanting to find out everything on my own." (See Appendix 1, Table 2)

Why teachers want this information

The main reason teachers want this information is to obviate any problems connected with the child's initial placement in the new program. They report that they want these facts, particularly those about Academic Achievement, in order to know how to "gear the classroom instruction and assignments to the child's individual needs and abilities,"

thereby ensuring "the smoothest possible integration of the child into the new class." A smaller number seek information in order "to know the child more fully" and a few want to understand the home situation in order to "facilitate dealings with the family." (See Appendix 1, Table 2 and List C)

Phase 2: What teachers prefer to find out for themselves about incoming students

The information from this question fell into five categories, four of which were identical with the original categories. No responses, however, could be classified as Development. A new category was developed and entitled General Statements. This category contains more than one-quarter of the total response and more than one-third of the primary teachers' responses.

Comments in the General Statements were largely unfocused: "I consider all information tentative," or "I hold it in the back of my mind but evaluate the child myself." Some statements, mainly from primary teachers, were directed specifically to negative judgments: "I'd like to be told he'd work but not told he won't work," or "I don't want to be told he's a hopeless case." Medical problems were one exception to this embargo on "bad news." The tenor of the General Statements indicates an overall reluctance to accept another teacher's value judgments of a student without "confirmation based on the work I give him."

The largest response to this particular request for information indicated that both groups of teachers prefer to discover the Attitudes, Effort and Work Habits of incoming students on their own. The greater proportion of these responses, however, represent the views of primary teachers. While almost none of the primary teachers' responses contained reference to Personal and Social Characteristics, about a quarter of the junior teachers' responses did so. The reverse was true of the Background category in which primary teachers' responses predominated. (See Appendix 1, Table 3 and List C)

Why would you rather find out for yourself?

Both primary and junior teachers generally stated that there "was not much point" in hearing certain types of advance information from others or that "it was better not to know." Half the total responses fell into these two categories. Responses from junior teachers, however, predominated in both categories. The balance of the responses referred to variables affecting the child's behaviour, namely, teacher, environment, and home. The first two combined accounted for a third of the total response. In these categories, responses of primary teachers predominated. (See Appendix 1, Table 3 and List D)

D. Summary

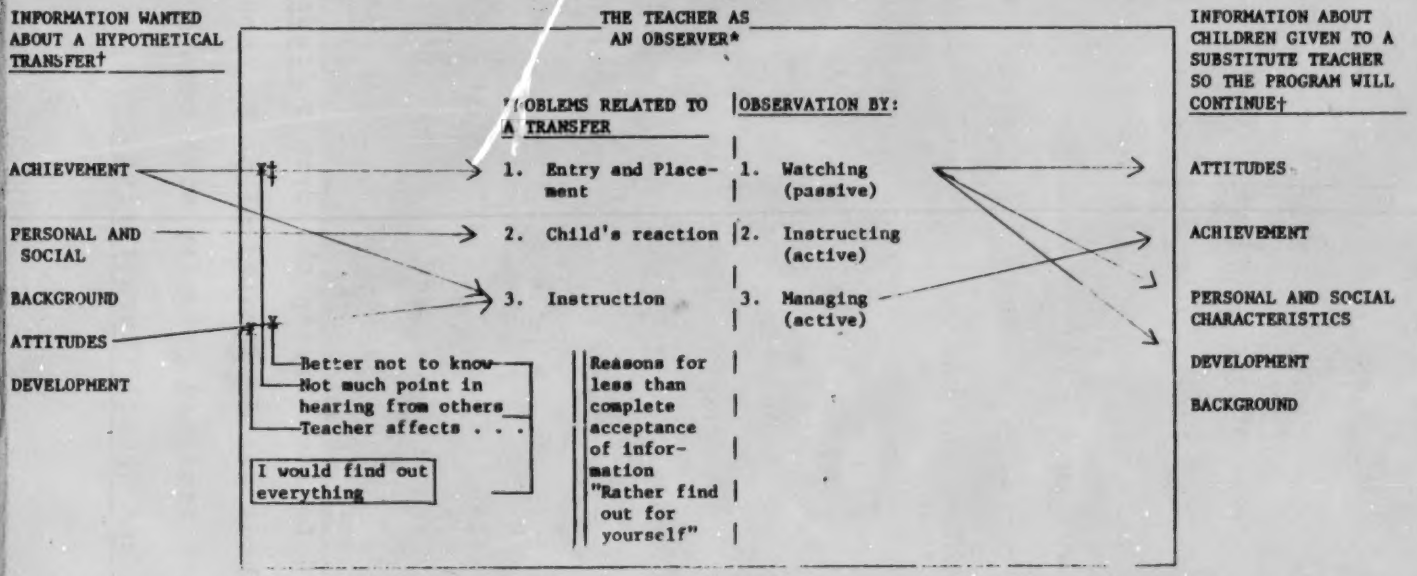
The major findings of the data analysis are summed up graphically in Figure 1 (p. 36). The results of the initial interviews revealed two modes of data collection employed by the teachers interviewed, one active, the other passive. The term active is used here to indicate the immediate manipulation of the environment in a physical or a psychological sense. There are times when the teachers seem to play a passive role. An example of such behaviour identified in the analysis was "watching students" without intervening in their activities.

The active and passive modes of observation are not evenly distributed across the response categories.

Examination of the separate categories reveals some interesting differences. The following data are taken from Table 1: What teachers tell about their children and how they obtain this information: Proportional response frequencies (p. 37). Active and passive modes appear equally important in understanding children's Attitude, Effort, and Work Habits. With regard to identifying children's Academic Achievement, active methods are designated of prime importance while passive methods are assigned priority with regard to learning about Personal and Social Characteristics.

Figure 1

Summary of the major findings in Chapter 3



*Beginning with the left column, a partial interpretation of this figure is what teachers want to know about the attitudes of a transferred pupil in order to plan instruction for the newcomer. Then, when the teachers are managing learning they observe the child in order to describe the child's level of achievement.

†The arrows represent the major relationships suggested by the percentage response ratios for teachers (see Appendix 1, Tables 1, 2, and 3). Categories of information without arrows captured less than five percent of total responses to the cells of the data tables.

‡The Xs indicate that, because "there is not much point in hearing from others," some teachers wanted to find out about the child's achievement for themselves after the child's arrival.

Table 1

What teachers tell about their children and how they obtain this information: Proportional response frequencies

Tell me about a child in your class	How do you know that?	
	Direct Instruction/ Managing Learning (Passive mode)	Watching (Active mode)
Attitude, Effort and Work Habits	13.7%	13.7%
Academic Achievement	7.2	14.4
Personal and Social Characteristics	13.6	2.6
Development	7.9	4.5
Background	1.5	.3
TOTAL	44.1	36.2

It is interesting to note that a third of the information about students offered by the teachers in the first interview referred to Attitude, Effort, and Work Habits and that teachers relied on active and passive modes equally in acquiring such information in the classroom. For the second largest item of information, Academic Achievement, the active mode is twice as useful as the passive to teachers in this study. In other words, teachers learn about the attitudes and behaviour of students both by watching and by instructing and managing learning while they learn about academic attainment primarily by instructing and managing.

When teachers talked to the "substitute teacher" in the first interview, they provided more information about Attitude, Effort, and Work Habits than about Academic Achievement. In the second interview, however, the situation was reversed. Teachers sought more information for themselves about Academic Achievement than about Attitude, Effort, and Work Habits. Why this strange reversal? One explanation for this phenomenon can be based on the assumption that attitude and behaviour displayed by children in the classroom are of prime importance to teachers. Lortie found in his School Teacher study (1975) that teacher/student interaction is the primary source of satisfaction in teaching. If this assumption is accepted, it follows that the largest single class of information given to substitute teachers will be related to Attitude, Effort and Work Habits. By providing a large volume of this kind of information, the teacher may be ensuring that the substitute teacher will "carry on" with his/her kind of program, thereby preserving intact the classroom climate reflected by these Attitude, Effort and Work Habits, until the teacher returns.

In the case of the transferred child, the focus shifts. The teacher's overriding concern here, according to the data, centres on Academic Achievement. In the second interview, the teachers stated that they wanted achievement information in order to solve the "problems of entry and placement" of

the new child. Such problems must be solved if the existing Attitude, Effort, and Work Habits of the class are to be maintained. One teacher expressed her reason for seeking academic information in this way: "So I can fit him into one of my reading groups." The implication seems to be that if the fit is not right, behaviour problems may arise and "class harmony will be disrupted." Virtually none of these teachers indicated that a teacher might overestimate a child's achievement; the expressed concern was always with underestimation.

The results of the first interview are remarkably consistent if it is to be assumed that teachers seek information that will enable them to preserve the class climate of harmony as represented by the collective of students' Attitudes, Effort, and Work Habits. The hypothetical person being inserted into their classrooms is different in the two interviews--a substitute teacher in the first instance and a new student in the second. A different kind of information is exchanged in each interview. In both interviews, however, the teachers' responses suggest that the information received will promote and preserve the existing climate in their respective classrooms.

The notion that teachers are seeking and providing information to preserve the prevailing classroom climate gains support from responses to Phase 2 of the second

interview: "What would you rather find out for yourself?" Generally, teachers wanted to find out for themselves about the Attitude, Effort, and Work Habits of the new child. The teachers' explanations suggest that attitudes and habits are created in the classroom as a direct consequence of teacher effort and teacher/student interaction. One teacher stated: "I want to find out about work habits for myself because it depends on the atmosphere in the classroom." Another reasoned: "Maybe it's the other teacher's fault; he might get along with me." In the teacher's opinion, a pupil's relationship with an individual teacher plays a substantial role in determining his/her Attitude, Effort, and Work Habits. For the same reason, teachers generally did not want to know anything that might be detrimental to the transferred child.

Phase 1 of the second interview adds another dimension to the interpretation of the data. Teachers are concerned with Attitude, Effort, and Work Habits not only because interaction with students is the major source of satisfaction in teaching (Lortie, 1975) but also because they have some direct influence or control over this key aspect of classroom life. As one person expressed it: "He may not work for another teacher but he may work for me." Although teachers do seek information about a transferring student, they do not automatically and unconditionally accept what they learn. They recognize that some information may be

prejudicial or even biassed and may require verification through personal knowledge and experience of the child.

Conclusions

Teachers provide and seek information about students in order to preserve the kind of atmosphere in their own classrooms which the combined Attitude, Effort, and Work Habits of the class support and promote. The classroom atmosphere is something teachers believe they can influence by the force of their own personalities and by the classroom environment that they provide. In addition, classroom climate is of prime importance to the teachers' satisfaction in the teaching profession. Classroom atmosphere is of more immediate concern to the teacher than is the student's academic achievement. The overview of academic achievement is considered, assessed, and reported, usually two or three times a year, while the effects of classroom climate are felt every day. Moreover, satisfactory classroom climate is perceived by the teacher to lead to satisfactory academic achievement.

Perhaps the most significant finding in this phase of the study was the distinction between the active and passive modes of learning about students. In everyday language, observation seems to mean watching, watching actively while instructing and managing learning, watching passively at all other times. Thus, teachers discover how children learn

or do not learn and how teachers can teach more effectively.

This chapter has opened up the richness of the classroom teacher's store of knowledge and understanding about children gleaned through constant observation and interaction. How these observations are collected, recorded, and reported will form the substance of the following chapters.

4 Teachers Record and Report Student Achievement*

The third and fourth visits were designed to discover what information the teachers regularly collect to assess their pupils' achievement, and then to determine how this information from various sources is integrated and reported. The interviews were designed to explore the following research questions: Do teachers spontaneously rank "observation" as their most important source of information about pupil achievement? If not, what do they say is most important? Are there consistent patterns that differentiate groups of teachers with respect to the sources of information they use for assessment?

Procedures

Interviewing Teachers about Pupil Achievement

Visit 3: Sources of Information

Phase 1. This interview was conducted in a completely unstructured manner in order to define what sources of information for assessment teachers would mention spontaneously. As before, the interviewers recorded the teachers' unstructured responses to the open-ended question: "What do you feel are the most important ways that you get to know about the achievement of individual children in your class?" These responses were transcribed as Reflections: Visit 3.

Phase 2. Teachers were then asked to complete a

*Corresponding data in the form of tables and lists of comments are presented in Appendix 2.

questionnaire dealing with collecting information about student achievement, and recording and reporting it. (See Appendix 2, Table 1.) The interview itself was designed to probe more deeply into the kind and amount of information teachers collect to assess their pupils, their rationale for its collection, and their methods of recording and reporting.

To this purpose, the teachers clarified and elaborated on all their recorded responses to the questionnaire. Lists of information collected were compiled under the following headings: 1) what; 2) why; 3) how; 4) how often; 5) when reported; 6) to whom reported. (See Appendix 2, Table 2.) Specific details were elicited and samples of available record and report forms were obtained for the study. Further questioning revealed the reasons why certain information is collected, but not used, and certain other information desired, but not obtained. Similar questions were asked about reporting procedures. (Table 2a)

Visit 4. Collection of Work

Preparation. The teachers had been asked to collect samples of work done by the four children previously discussed (two average children and the highest and the lowest achievers) for six weeks prior to Visit 4. Four containers were provided in which each teacher was asked to place "any product of the child's normal daily activity which you

usually look at or collect that indicates to you how the child is doing." Each item collected was dated. Assurance was given that the work collected would be used to stimulate discussion and not to evaluate the child.

Purpose. The collection of work was conducted:

1. to determine the correspondence between the daily work that teachers reported is the most important source of information with respect to recording and reporting (Visit 3) and the actual collections of work presented and discussed by the teachers (Visit 4);

2. to detect possible differences in interpretation of work collected with regard to teacher expectations (high, average, low achievers); and

3. to discover if some teachers interpret their pupils' work according to principles of child development, and others, primarily according to principles of curriculum.

Procedure. The teachers arranged each child's collected work in chronological order and then discussed each item giving the interviewer (a) a description of each item, (b) an explanation of the data derived from each item, and (c) an indication of the use the teachers made of each item. After this detailed review of each child's collection of work, the teacher was asked: "What does all this tell you about how _____ (the child) is doing?" These statements were then labelled Reflections: Visit 4.

Visits 3 and 4 together produced a detailed picture of the sources of information about individual pupil achievement reported by the teachers as most significant, and the

procedures actually employed in collecting, recording, and reporting assessment information by these teachers.

Results

Visit 3: Sources of Information

Phase 1. Major Sources. Content analysis of the teachers' recorded comments following the initial question asked in this visit revealed six major sources of information about student achievement:

1. marking and checking of daily work;
2. using standardized and/or teacher-made tests;
3. "child watching" or classroom observation;
4. talking to children, discussing, listening, etc.;
5. gathering information about behaviour outside class, e.g., schoolyard interaction, home environment; and
6. obtaining information from previous teachers or from files.

For a summary of the data see Appendix 2, Table 1.

Daily work, testing, and observation appear to be the major sources of information mentioned by teachers. Rank order, however, reveals that twenty-three teachers mentioned daily work first or second, while thirteen mentioned testing first or second and fourteen mentioned observation either first or second.

Examination of the data by divisions revealed no apparent overall differences between how often primary and junior teachers' mentioned daily work, discussions, reports about

behaviour outside class, and previous teachers' records as sources of information about pupil achievement. With respect to how often they mention testing and observation and how important they believe them to be, the primary and junior teachers in this sample differ considerably. (See Appendix 2, Tables 3 and 4.) Primary teachers mention observation significantly more often than do junior teachers and testing less often, though statistically not significantly so.

The results of this part of the interview suggest that marking and checking daily work are perceived by the majority of teachers in both divisions as the most important way they learn about the individual achievement of their pupils. Primary teachers, however, in addition to actual marking of daily work, rely more heavily on observation than on formal testing, while junior teachers rely more on testing for knowledge and skills than on observing work in progress as the most important source of information about achievement.

Questionnaire On Collecting, Recording, and Reporting

Phase 2. When asked what information they regularly collected on each child in their classroom for the purpose of recording and/or reporting, the teachers' responses could be categorized into three main areas: 1) daily work, 2) tests, 3) impressions gathered from observation. These are described in detail below.

Daily Work. By "daily work" these teachers appear to

mean exercises that are assigned to the children on a regular basis. These exercises are usually pencil and paper type, based on a single concept, preceded by directions from the teachers. They are relatively short, assessed by the teacher, corrected by the pupil, and then reassessed. Daily work is usually done in workbooks or on teacher-made work sheets. While such work is assessed daily by most teachers, it is actually collected and examined by many teachers on a weekly or term basis to record and then later report.

Tests. When teachers referred to tests as an important source of information on pupil achievement, they usually meant teacher-made tests, similar in design to daily seatwork, but covering more than one concept. The tests are collected and assessed by the teachers and, typically, a mark is recorded. Only three teachers (in the primary division) recorded anecdotal comments alone on tests. Tests were cited by virtually all the junior division teachers as a means of assessing pupil achievement in at least one of the areas of mathematics, reading, and language arts. Almost half of the primary teachers did not mention testing; those who did mentioned it only in the areas of mathematics and reading.

Standardized testing as a means to assess pupil progress was mentioned only twice. In these two cases it was the policy of the school to give reading tests at the beginning and the end of the year. These results were not used by the

teachers for recording and reporting.

Impressions from Observations. Included in this category are recorded comments and impressions arising from the teachers' observation of the children's behaviour both in and out of the classroom. Teachers reported that they collect information in this way on what can be categorized as Work Habits, Effort, Relationships, Attitudes, and Learning Style.

During the questionnaire and structured interview, only four junior teachers mentioned that they record this anecdotal information, whereas the recording of anecdotal comments was mentioned at least once by every primary teacher interviewed. Twelve primary teachers and two junior teachers indicated that this information, gathered by observation, was collected for the purpose of reporting, while the remaining teachers, who mentioned observing activities and recording comments, used the information collected only to assess progress.

Table 5 in Appendix 2 indicates the kind of information teachers say they regularly collect in order to assess pupil achievement. Each of these is considered below.

Mathematics. Every teacher in the sample reported collecting information about mathematics daily or at least weekly. The reasons they collect this information and the

way they record it, however, appear to be somewhat different for primary and for junior division teachers.

Primary teachers mainly record anecdotal comments on daily mathematics to assess and report progress. Nine primary teachers also give tests, but only six to record and report marks. Junior teachers, on the other hand, record actual marks on daily or weekly seatwork. In addition sixteen of the junior teachers interviewed also give weekly or term tests and record the test marks in order to assess and report progress.

Reading. Thirty-four teachers collect information either daily or weekly about reading--comprehension, phonics, oral reading, and related activities. They collect this information primarily to assess progress and make reports; however, nine primary teachers also stated that they collect information in order to modify the program. Three primary teachers said they used information gathered "to determine experiences required for the child"; "to include in lesson plans for next day"; and "to check on group placement and to see if additional work is needed." Only one junior teacher suggested that information on reading was collected "to use in planning program and to adjust program to the child's level."

The testing of reading and the recording of results are similar to the testing and recording of results in mathematics.

The usual mode of recording is anecdotal in the primary division and by marks in the junior division. Those primary teachers who did record marks in reading were the same ones who recorded marks in mathematics. Most of the junior teachers test reading each term and record marks, while the same six primary teachers who record reading test marks for reporting also do so for mathematics.

Language. In the comments collected from the teachers in the sample, language activities were usually separated from reading and defined to include grammar, sentence structure, spelling, printing, and handwriting. Twenty-one teachers interviewed said they regularly gather information on language. At the primary level all the teachers who said they look at language work reported that they do this daily or weekly and only by collecting and examining daily workbooks. For these teachers, the marking and recording are done in the workbooks as well. None of these primary teachers uses testing to assess progress in language activities.

The junior teachers, on the other hand, rely heavily on testing to assess and report progress in language. Of the thirteen junior teachers who mentioned collecting information in this area, eleven said they do so by weekly or term testing and only two assess strictly through daily work.

Social Studies, Science, and Projects. Of the nineteen

teachers who mentioned collecting information on social studies, science, and project work, all but three said they collect it only on a term basis, and all but the same three record marks. In the junior division, term tests are given in social studies and/or science by most teachers who mentioned them. No primary teachers reported giving tests in these areas. Half of the primary teachers who mentioned this category examine seatwork to assess progress, while the others said they only observe the children in these activities.

Effort, Attitudes, and Work Habits. Sixteen teachers of the sample reported that they regularly collect information on their pupil's work habits through observation. Two teachers said they check work habits daily, and two said they record such information weekly, but all others said they collect and record it only sporadically as needed. Of the sixteen teachers who reported collecting information on work habits, twelve record anecdotal comments and four do not record the information at all but make "mental notes." The reasons cited for collecting information on work habits varied. Six teachers said it was for reporting, three for assessing progress, one for modifying program. Other reasons included "to check when work is not done," "to clear up problems," "to note trends," and "to relate to home life."

Art, Music, Physical Education. Fifteen teachers reported collecting information from the arts subjects regularly: two teachers daily, four weekly, and the rest on a term basis. Only five teachers collect it for reporting, four to assess progress, and two to modify program; and most teachers gave other reasons as well, such as to assess interest, participation, creativity, and development. One teacher (in the junior division) assigns marks in this area, five teachers do not make any record of information gathered in Art, Music, and Physical Education. The remaining nine teachers who collect such information record anecdotal comments and four of them retain examples of the completed work as a record.

Creative Writing. In this category teachers included story-writing, composition, and poetry. Thirteen teachers use these activities to gain information about their pupils on a weekly or term basis. Two primary teachers mentioned looking at creative writing daily, one by way of "story workbooks" produced by the children that are collected daily, and the other by "child-dictated stories" read daily. None of the teachers interviewed reported that they test creative writing. Their assessment of pupil progress is made by examining students' written work primarily on a weekly basis. Only four teachers record marks for creative writing; the others prefer anecdotal comments in this area.

Background. Only three teachers of the sample said they collect information about background, behaviour outside class, or influences on the children. All three were primary teachers. Two collect the information on an "ongoing" basis and one does so each term. Information is recorded anecdotally or not at all.

Further Information Desired. After completing the questionnaire on collecting information, teachers were asked: (1) is there any information you regularly collect that is not used? (2) is there any information you do not have but would like to obtain, and how might you go about obtaining it? and, (3) is there any information you would like to report but don't?

It was found that virtually all the concrete information collected is used in some way. However, eleven teachers expressed reservation about reporting certain information they had about the children, including: "tests that turn out to be inappropriate"; "marks that are way out of line"; "some anecdotes and personality opinions"; "personal family information"; "anything that may be damaging to the child"; and "emotional and social problems."

In response to the second question, ten teachers said they don't want any further information. Of the twenty-six who said they would like to have additional information on the children, the most common area of concern related to

information about the child's home background. This finding is consistent with the results of the teachers' response to an earlier question (Visit 1). When asked "Is there any type of information you do not have but would like?" the category which was mentioned most often was information on home background. The teachers felt that this information should be made available to them to give them a better understanding of the children in their classes, primarily to plan and modify their program accordingly, and to assist the child more effectively.

Several primary teachers also cited a need for more anecdotal comments and reports from previous teachers, while junior division teachers wanted previous test results and more standardized test information on children in their classes.

Several teachers suggested they do not have some information they want because the large number of children in their classes and lack of time make it difficult to pursue information in some areas. In addition, a few teachers expressed the notion that they do not have an adequate method of organizing and recording what one teacher called "nebulous" observational information. Some of the ways cited for possibly obtaining further desirable information included: "having more time to talk to the parents and previous teachers"; "time to develop accurate descriptions and recording

systems"; "more resources available for testing and special services"; and "more time to watch and talk to the children individually."

Twenty-four teachers said there wasn't any information they would like to report but do not report. The responses of the twelve teachers who wished to report further information consistently reflected a desire to report to parents more explicit and direct information about academic achievement, personal and social characteristics, and home and family life. Six teachers wished to report actual grades and class standings, four teachers said they would like to be more honest in expressing their feelings and impressions about the child's personality and two teachers felt restricted because they could not offer parents advice on effective child management.

Format for Recording and Reporting

Samples of the forms teachers used on their own or as required by their school or board were collected wherever available. Examination of these collected specimens indicated differences between the report card formats of the two boards of education participating in the study. The format of reporting and the recipients of reported information were determined by the local board of education and/or the specific school administration, with only minor variations left up to the individual teachers. All teachers were required to

report to parents using a written report card. Half of the teachers indicated that these term reports were routinely looked at by the principal, while the others reported to the principal only as required when a specific problem arose and/or at the yearly promotion meeting.

One of the boards uses a central system requiring letter grades for achievement in both primary and junior divisions. The other school board allows the individual schools to develop and use their own system. Samples of report cards from the latter revealed no letter grade or marks required for reporting at the primary level; a checklist and anecdotal comments are the usual method of communicating the pupils' progress to parents.

The individual variations between teachers usually consisted of procedures over and above those required by the board or school, such as additional reporting to parents, personal styles of reporting to children, more frequent use of support services, and so on. Aside from the promotion meeting and recorded information on the O.S.R. cards, reporting to other teachers is done orally, and informally, only as the need arises, and usually at the initiative of the recipient teachers. The teachers do not see reporting progress to children as only a formal reporting system, but as part of the continuing interaction between teacher and student about daily work and behaviour.

Recorded information in each subject area usually remains in charted form for the whole class with separate pages for each subject. Unless there is a problem of some sort and outside help needed (principal, special services) evaluative information for each child is not "integrated" until, what the teachers call, "end of term" or "report card time." At that time, the records for each child are examined and an attempt is made to fill the gaps in information as defined by the report-card format. Teachers did not speak specifically of combining the anecdotal with the more concrete assessment, although a few did refer to the latter corroborating the former ("it confirms my hunches about his ability to do written work").

The one area in which several kinds of information were integrated was what is variously described as "integrated studies" or "integrated unit," and what some teachers referred to as "project work." Interestingly, however, while a few teachers pointed to such products as being most indicative of how the child was doing, the method of recording achievement in this type of work was primarily anecdotal and not easily integrated with other sources of information on achievement for purposes of reporting.

In the results of the questionnaire on recording and reporting, it may be noted that in the mathematics and reading areas, testing was cited eighteen times in the

primary division as a method of assessing student achievement for purposes of evaluating and reporting progress. Almost all of the incidents of primary testing were mentioned by teachers whose board policy is to record a letter grade on the report card. The preamble to the report card sent home to parents states specifically that "this pupil progress report is based on the student's daily work and the results of regular tests." It may be recalled that only six of the nine primary teachers who mentioned giving tests in this area recorded test marks in mathematics. The six who recorded marks were all from the board requiring the reporting of grades. It appears, then, that when not specifically required to report grades, primary teachers prefer more observational and anecdotal methods of assessment and recording.

Visit 4: Collection of Work

In Visit 4 the teacher was asked to lay out in order and present chronologically all examples of the daily work collected for each child. The interviewer then listed what the product was, what the teacher said that piece of work told him or her about how the child was doing, and what the teacher did with the information received. Examination of the work collections revealed almost complete consistency between what the teachers said they looked at regularly on the questionnaire concerning collection of work,

recording, and reporting and the work they actually collected during the six-week period.

What Was Collected--Primary. For each primary child at least one piece of art work was included. The most common item was a painting or a picture using crayons although examples of cutting and pasting activities were also quite common. Every child also had some form of mathematics activity included in the collection. These were usually mimeographed sheets based on a mathematical concept that was being developed. In very few instances at the primary level were they classified as tests. Also included in most children's collections of daily work were sheets (usually mimeographed) based on reading, language, phonics, creative writing, and projects or booklets. Some primary teachers, especially those who worked with junior kindergarten, senior kindergarten, and grade 1 children included such things as puzzles, block creations, and manipulative materials as examples of what they look at to determine how a child is doing.

What Was Collected--Junior. Again, all junior teachers collected examples of what they called "daily work." But, in contrast with the primary teachers, teachers presented, as examples of daily work at the junior level, very little art or craft work. It appears that for the group of teachers in the study painting, crayoning, cutting and pasting, and other craft activities are considered as legitimate

"daily work" for the primary child and are used by teachers at that level to tell how the child is doing. At the junior level, however, art almost completely disappears as an example of "daily work." What these junior teachers considered daily work included mathematics and reading exercises, creative writing, language, social studies, spelling, research projects, and science. Some of this material was mimeographed sheets although much more of it was special "workbooks" devoted to a particular area of the curriculum. Although grade 4 children still had many worksheets in their collection, grade 6 children tended to have more of their work in workbooks. Samples of mathematics work were included by every junior teacher for every child and in every case there were numerous pieces of work included. Obviously children at this level do mathematics almost every day and performance in this area indicates to the teachers how the child is doing--a fact also indicated by teachers' responses to the questionnaire on the previous visit. Reading exercises were also included in the work collection of every child at this level but not to the same extent as mathematics. Each teacher collected the material in a slightly different fashion and it is impossible to make many generalizations about the volume of work collected. Nevertheless, it is evident that these junior pupils spent much of their time in paper-and-pencil-type activities related to

mathematics, reading, creative writing, spelling, and language and to a lesser extent to social studies, research projects and science and that what they produce in these areas is looked at by their teachers to determine what progress they are making.

To a much greater extent than in the primary division collections, pieces of work in the junior collections were classified by the teacher as tests. In every case these were teacher-made tests and were not unlike the regular day-to-day worksheets. The difference seemed to be that these "tests" addressed themselves to more than one concept and were marked, graded, and often recorded in a mark-book by the teacher. There was no indication that these tests were more or less important to the teacher in determining how the child was doing. Their main function seemed to be to provide "marks" that eventually could be used to justify the grade or comments the teacher planned to place on the report card.

What Does It Tell You?

The teachers were asked to comment on what individual pieces of work indicated to them. Their responses could be readily grouped in order of frequency under the following five headings: Academic Achievement; Effort, Attitudes, and Work Habits; Personal/Social Characteristics; Development; and Background.

Academic Achievement: Every teacher made comments about the child's academic achievement on almost every piece or work examined. (For examples see List A in Appendix 2.) Frequently, the comments were simply a description of the assignment. More often, however, the teacher used the work to provide additional information about the child's academic ability. In other words, the teacher seemed to have a picture of what the child could or could not do and the specific piece of work being examined merely corroborated that picture. As an outsider, the researcher would not always have interpreted the work the way the child's teacher did. Obviously, the single sample of work was only a small piece of mounting evidence that the teacher was amassing on each child.

Effort, Attitudes, and Work Habits. As they examined the collected work of the children, thirty-three of the thirty-six teachers made statements about the effort the children made, their attitude, and their work habits. Again, it was very difficult, if not impossible, for the researcher to infer very much about any of these characteristics from the work being examined. In fact, the product of two different children often appeared, to the reviewer, exactly the same, yet the teacher's comments about the two children were very different. Obviously, teachers "read into" the work the children do much more than is evident from merely looking at examples of it, bringing to bear on their evaluation

information on, and consequent expectations of, the student. (See List B)

Development. Although thirty-two of the thirty-six teachers made at least one developmental comment, the total number of these comments was far less than the number of comments about either academic achievement or effort. In fact, with the exception of three teachers who made numerous comments about the development of the children, most teachers made only one or two comments which could be classified as developmental. (See List C)

Personal and Social Characteristics. Conparatively few comments were made about the personal and social characteristics of the children. Eighteen of the thirty-six teachers, however, did make at least one statement that fell under this heading. (See List D)

In every case the justification for comments made was not apparent to the researcher in the work being discussed. It was obvious, however, that the teacher's understanding of the child influenced what was said about a particular piece of work. One could conclude quite safely, therefore, that a teacher brings to each new evaluation situation a picture of the child and his or her strengths, weaknesses, attitudes, and understandings. The new piece of work usually confirms what the teacher already knows about the child. If the sample of work seems "out of character," the teacher

either rejects it or rationalizes the inconsistency. Attitudes toward each child and awareness of his or her ability seem very firmly entrenched; particular products serve to corroborate that perception.

How Is It Used?

When the teachers were asked how they used the information they gleaned from looking at the children's daily work their answers were far from conclusive in terms of this study. All of the teachers mentioned using the information to improve instruction. By looking at the work they could tell whether the child had grasped the concept being developed. Sometimes it was evident to the teacher that few of the children understood the work and thus the lesson would be taught again. More often, however, only a few children completely misunderstood the material presented and the teachers would then go over it for their benefit.

Teachers also seem to use the information from daily work to confirm or check on their own teaching. By observing what the children produce in response to instruction, the teachers receive instant feedback on their effectiveness.

Some of the teachers stated that the insights derived from examining the children's daily work form the basis of their reports to parents. They actually record some information for future reporting and often pieces of work are

kept to show to parents during reporting interviews. While much of the work, especially at the primary level, is sent home and thus serves as a continuing, informal reporting system, a great deal of what these teachers learn from looking at each child's daily work is stored for future reference. (See List F)

Obviously, much of what these teachers learn from looking at daily work is used immediately to modify instruction. Moreover, it is frequently used to confirm, and in some cases modify slightly, the teacher's perception of that child. By constantly looking at the children's daily work, the teachers maintain a picture of each child's progress.

Summary

It appears that while teachers do regard observation as a very important part of the assessment process, they do not necessarily use it as the most important source of information on student achievement, and they are not aware of exactly how they use the results of observation in making judgments about students.

The most thorough coverage of assessment information by these teachers is in the area of curriculum-based academic achievement. Both the questionnaires and the actual work collections reveal consistent collecting, checking, and recording of daily work in the curriculum areas of mathematics, reading, and language. Performance in social studies, science,

the arts, and project work, however, is not as widely covered. Nevertheless the procedures for collecting, checking, and recording these subjects on a term basis are similar to the teacher's daily or weekly methods.

A qualitative difference in recording evaluative information does appear between the primary and junior divisions. Marks are recorded more frequently by the junior teachers, while the primary teachers make greater use of anecdotal records of performance. This difference also reflects the greater use of tests in the higher grades.

The teachers' own comments reveal qualitative differences in their methods of collecting and recording information. All teachers interviewed have recording systems (mark books, checklists, mark sheets, daily records, etc.) with which they feel quite comfortable in the curriculum areas where concrete, collectable information is readily available. The greatest variations in quality and coverage of information occur, however, in the areas less objectively marked, in which the teachers said they rely more heavily on "impressions" or "observations" to assess pupil performance. These areas include the aspects of curriculum not examined as often (see above) but also included are the behavioural (personal, social, effort, attitude, work habits, learning style), developmental, and background characteristics of the children. Most of the teachers rely on recorded, anecdotal comments in assessing the influence of these

characteristics on achievement, but it was a consistent finding that this information is not widely or regularly "collected"; it is, rather, recorded only "sporadically as needed" and then only in a very idiosyncratic way.

Some teachers have no systematic recording technique for the "observational" information, and several of those who do have a system (a special book, a comment sheet on each child, etc.) find that it is very often not used consistently because they have no systematic way of "collecting" such information. It was not uncommon for the teachers to say they would like to be able to take the time or create the circumstances that would allow them to effectively record comments or impressions. It appears, then, that the quality and coverage of evaluative information are thorough and extensive in the academic areas. Nevertheless, even though most teachers consider observation an important source of information, they find it difficult to collect and record such information systematically. As one teacher summed up the situation.

> I wish I had a mini-computer to whisper my observations into as I moved around the room that would organize and record the nebulous information so I wouldn't forget it or disregard important things when it came time to assessing and reporting on a child.

5 Teachers Estimate Children's Academic Achievement*

The task of estimating children's achievement requires teachers to use the broad range of information they possess about each child. Such tasks require the same integration of information that teachers use in grouping children, giving assignments, preparing reports, or making end-of-year promotion decisions.

The research strategy reported in this chapter and in Chapter 6 provides a comparison of teachers' estimates of their pupils' performance on two achievement tests with actual scores on the same tests. Standardized achievement tests in the areas of reading and mathematics were chosen for this phase of the study to provide an objective basis for comparisons among the 36 teachers. Other aspects of child development might be just as appropriate as objects of study in this phase. Academic achievement, however, was the prescribed focus of this study. In addition to obtaining teachers' estimates and children's test scores, researchers invited teachers to comment on their estimates and on the actual test results. In this chapter, statistical comparisons of estimates and actual results will be presented. In Chapter 6, teachers' comments will be analysed.

Procedure

During Visit 5, teachers were asked to choose two sub-

*Corresponding data are presented in Appendix 3.

scales from the Metropolitan Achievement Test for their grade level, one from the reading-language area and the other from the mathematics-quantitative area. They examined each test carefully and then estimated how many items in each sub-scale each child would answer correctly. The tests were then administered to the children by a project research assistant. Data were collected from all 36 teachers in the study, and from 894 children for whom parental permission was obtained. This total included 93% of the children in the primary classes and 84% of the pupils in the junior classes.

Results

Overall, the teachers in the study estimated closely how well their classes would perform as a group. However, there was a wide range among teachers in their ability to predict the performance of individual children. Furthermore, in most classes the test performance of a few children was under-estimated or over-estimated by a substantial amount. As will be emphasized in the discussion of results and implications, these findings do not mean that the teachers estimates were necessarily in error. The major empirical findings regarding the relationships between teachers' estimates and children's actual scores are given below. Details are provided in Appendix 3.

1. Teachers' estimates of their classes' average correct scores on both sub-tests were close to actual class average scores. (Appendix 3, Table 1)

2. Overall, there was more agreement between teachers' estimates of individual children's reading scores and actual test scores than there was between teachers' estimates of individual mathematics scores and actual test scores. However, among the 36 teachers there was notable variation in the degree to which their estimates of both reading and mathematics scores agreed with actual test results. The teachers ranged from essentially no agreement (correlation coefficients under .25) to very high levels of agreement (correlation coefficients of .90). (Appendix 3, Table 2)

3. There was little correspondence between teachers' levels of agreement between estimated and actual test scores between the two sub-tests. Thus teachers who had a high degree of agreement between their estimates of children's reading scores and actual test scores did not necessarily have high degrees of agreement between their estimates of mathematics scores and actual test scores and vice versa. (The rank-order correlation between estimate-actual correlations for reading and mathematics was .32.)

4. The teachers expected a much greater relationship between children's performance on reading tests and their performance on mathematics tests than actually existed. The median correlation between reading and mathematics estimates was .82, while the median correlation between reading and mathematics actual test scores was only .46. This overstatement of the relationship between reading and mathematics performance contributed substantial errors in estimating actual scores in one or both achievement areas. (Appendix 3, Table 3)

5. In many classes, the performance of some children was under- or over-estimated by a large amount. Children who received the largest underestimates in each of the 36 classes were expected, on the average, to obtain a score of 48 percent of sub-test items correct. They actually obtained an average of 75 percent correct. In the case of

largest over-estimates in each class, children were expected to obtain an average score of 75 percent correct and actually obtained an average score of 48 percent correct. (See Appendix 3, Table 4 for under- and over-estimates on each sub-test for the primary and junior grades, and Appendix 3, Table 5 for variation between teachers in under- and over-estimates.)

Discussion

Results presented in this chapter indicate variable levels of agreement between estimates of performance by teachers and estimates of performance based on standardized tests. When individual children were considered, the magnitude of differences in the estimates between teachers and tests was sometimes large enough to move a child's rank position in the class from the lowest third to the highest third or vice versa. It must be noted that both teachers' judgments of children's levels of achievement and children's test scores represent estimates of their actual level of achievement. Some possible reasons for the difference between teacher estimates of test results and children's actual test performance may be:

1. The appropriateness and completeness of test content and procedures to the skills being tested (test validity);

2. The appropriateness and completeness of the sources of information the teachers used to judge levels of children's achievement;

3. Random errors in test performance including variations in children's functioning resulting from health, mood, number of test items, interruptions, mishandling of test instructions, etc. (test

reliability);

4. Random errors in teachers' judgments. (Observations and examination of children's work will vary for each child, and vary according to children's functioning from day to day as a result of the child's health and mood as well as incomplete sampling of the child's skills. In addition, the teachers must rely on memory for much information about the child's skills. He or she will be selective and what stands out about one child may be forgotten about another.);

5. Systematic errors in teachers' judgments influenced by their overall impressions of each child based on a variety of pupil characteristics and background conditions;

6. Cheating on tests;

7. The relatively short periods of time teachers were allowed to consider their estimates. (This may not be a legitimate reason because it is true that practical classroom decisions concerning levels of performance are usually made without much time for detailing reflections.)

Despite these problems, 25 percent of the teachers were able to make estimates of their children's performance in the test situation that correlated highly with reading scores and another 25 percent made estimates that correlated highly with mathematics scores. (See Appendix 3, Table 2) Thus it is possible, despite all the difficulties noted above (and doubtless others), for teacher and test estimates of performance to agree substantially for many children in a class. However, even in classes with high teacher-test correlations on particular sub-tests, there were individual children for whom there were fairly large discrepancies between teacher estimates and test scores.

Implications

The fundamental point of the finding that there are some fairly large discrepancies between teacher estimates and children's test scores is not that teachers or tests are "right" or "wrong". The point is that differences between teacher estimates and test estimates of performance indicate that more information is needed. Thus, objective assessments of children's performance covering a fairly wide range of levels and tasks within a skill area, as opposed to skills covered in a particular week's or month's work, can provide an important addition to the teacher's other sources of information about children.

Whether existing standardized tests represent the only possible additional source of information is quite another question. Certainly the Metropolitan Achievement Test, with its use of American content (coins, measure, etc.), assumption of basal reading curriculum, and minimal numbers of items on each sub-skill, is far from perfect.[1] It would be desirable if the approach clearly identified specific sub-skills being assessed, and allowed a teacher to determine which skills had been mastered by all or most children in a class, which by some, and which by few or none of the children. This would require modification of current practices

[1]See Wahlstrom et al. (1977) for a review of standardized tests at the elementary level.

in the design and especially in the scoring of most standardized tests. (The Mathematics Topics Tests recently developed by the Guidance Centre illustrate a competency or skill oriented approach.)

In relation to "objective" or standardized tests as additional sources of information about pupils' achievement levels, two other aspects of the procedures used in this study may be desirable. One is the process of establishing in advance explicit teacher estimates of performance. The other is the use of independent test administrators.

The process of establishing and comparing estimates of performance ensures that differences will be noted, and hopefully provide a basis for further examination. This, after all, is the purpose of using an additional source of information.

The use of independent test administrators proved most effective in this study. Children did not appear to be "put off" by unfamiliar testers, and a number of teachers commented on the business-like approach the children adopted under these circumstances. A possible way of obtaining independent test administrators would be to have teachers exchange classrooms or even schools for testing. A brief workshop on test administration might also be desirable.

In suggesting that standardized testing may have a place in the classroom, we emphasize that such tests must not be viewed as criteria against which teachers and

child performance would be assessed. This would entirely defeat the purpose of using tests as an additional source of information about achievement. A great deal of anxiety about test performance would be created for both teachers and children, and teachers would be under some pressure to teach to the tests. The main purpose of objective testing must be the identification of variant cases for further review.

If teaching is to be truly geared to individual levels of performance, those levels must be determined with reasonable accuracy. The present study, conducted with teachers who as volunteers might be presumed to be reasonably confident of their own evaluative skills, casts some doubt on the validity of normal classroom sources of information as the sole basis for estimating performance levels. There is need for continued study of this problem, and for improved practical procedures for developing accurate assessment of performance. More detailed recommendations for further study and development are given in the last chapter.

6 Teachers Comment on Estimating Student Achievement*

During Visits 5 and 6 teachers were asked to comment about their estimates of the achievement scores of their children on two standardized tests. Comments were solicited before the tests were administered and while teacher and interviewer reviewed the actual achievement scores. The teachers, therefore, twice selected from the mass of information they possessed about each child, the salient factors that seemed to them to affect the child's achievement.

An overview of pupil participation in the administration of the standardized tests and the mean percentage of participating pupils about whom teachers commented both pre-test and post-test is presented in Appendix 4, Table 1. In each division almost twice as many comments were made after the tests were administered (see Table 2). This may be explained by the greater array of material available to them then and by the greater amount of time allowed for teacher reaction in Visit 6.

Before the test there was a wide variation in the number of individual students the teachers made comments about. Very few made comments about all their students, then, and most concentrated on about one-third of students; seven teachers made no comments. The different interests and perceptions of the individual teachers may account for the wide

*Corresponding data in the form of tables and lists of comments are presented in Appendix 4.

variation in the number and quality of pre-test comments. The varying manner of interviewers seeking spontaneous and unguided responses and the use of an unstructured method that did not elicit comparable sets of responses from teachers are also possible explanations. These same factors were influential in the post-test interview when more teachers commented on a greater number of their students.

Teachers' Pre-test Comments

Many of the comments made during Visit 5 had to be disregarded in analysis because they were too brief or because they were irrelevant. The predominant characteristic of the pre-test comments that were analysed was an absence of pattern. Comments of teachers in both the primary and junior divisions were randomly directed to pupils in every part of the range of estimated achievement; no tendency to focus on expected high achievers or low achievers was noted. Additionally, there was little to suggest that teachers in either division consciously based their estimates on theories of learning, curriculum, or child development. Even within the sets of comments of individual teachers no use of theories such as these was discernible. Teachers commenting before the tests were administered tended to respond in a highly spontaneous manner, focussing overwhelmingly on the anticipated achievement of their pupils in a novel test situation.

In making comments, teachers drew from a broad knowledge

of the classroom behaviour of individual pupils gathered in a variety of formal and informal ways. Neither the comments in general, nor the comments of particular teachers, fell into recurrent patterns. Instead they tended to be highly individualized, focussing on those unique characteristics of individual pupils that teachers believed a priori would most directly determine achievement on the specific sub-tests to be administered.

Although it is difficult to generalize on the basis of the small number of comments made, a cross-comparative analysis reveals that certain areas were emphasized: (1) effort, attitude, and work habits, (2) developmental characteristics, and (3) academic achievement. Teachers believed that background factors functioned as determinants in only 12% of cases. Personality and social factors, cited only twelve times, were believed to have a very small influence on achievement in these divisions (see Table 3).

A comparison of comments made by teachers in the two divisions fails to reveal differences in their perceptions. All the teachers' comments fell into the same categories as those made during Visits 1 and 2, a fact that suggests consistency in the approach taken by these teachers (see List A).

Teachers who commented about effort, attitude, and work habits tended to focus more frequently on work habits than

on effort or attitude. Comments about developmental characteristics were about pupils' reactions to the test situation, general emotional stability or lack of it, and their place among their peers. Very few comments were made about their physical or verbal development, behaviour in class, or self-concept. Comments only obliquely referred to academic achievement. Most teachers were not specific about the standards on which they based judgments of a pupil's absolute or relative achievement. When reading or mathematics groupings were mentioned, almost invariably there was no accompanying contextual information given about the meaning of the group's achievements. Comments about background referred mainly to country of origin but rarely to home conditions (see Lists A-D).

Teachers' Post-test Comments

Two weeks after the tests were administered, researchers and teachers met for a final interview. While the teachers were reviewing and discussing the results of the two tests their comments were informally recorded. The teachers were then asked to comment on the differences between their estimates of achievement and the actual scores of individual pupils in their classes. Finally, they were asked to comment, in general, about the positions of their pupils in three ordered class lists, the earlier rankings that the teachers had made based on their own perceptions of overall achievement,

and the two later rankings based on actual test performance in reading and mathematics.

The three sets of comments that emerged showed great variability in both number and quality. They also revealed extensive overlap of subject matter from one set to another. As a result, the analysis was organized according to common subject matter and not according to the comments made in response to the three sets of data provided.

Many comments could not be included in the analysis because they lacked contextual clarity. Twelve teachers did not comment while reviewing the actual test results of their pupils. Five teachers did not comment while reviewing the three rank-ordered distributions. All teachers, however, made comments about the similarities and discrepancies between the estimated and actual scores of their pupils on the two tests.

The number of post-test comments was much greater than the number of pre-test comments (559 and 191 respectively), and they touched on four distinctly different topics: estimating, ranking, testing, and personal characteristics of pupils. Teachers focussed on the last category almost three times as often as they emphasized estimating, ranking, and testing combined (see Table 4).

How Teachers Estimated Test Scores. Despite the spontaneity of their comments, teachers, as they talked, tapped

a massive fund of information and impressions about their pupils. Their estimates of achievement were drawn from the following four sources.

1. Day-to-day performance and work habits.
2. Membership in a particular skill group.
3. Comparison of one pupil's achievement with that of another.
4. Performance in teacher-made tests or recent standardized tests.

Despite the tendency for teachers' comments to cluster, no category predominates; a random distribution was evident across the data (see List E).

Apart from the four considerations (above) many comments revealed that the estimating process was highly individualized. Many of the teachers stressed that the many factors interacting to determine a child's achievement made their task of estimation very difficult. A few teachers admitted an inability to make the required estimates (see List F). One summed up the difficulties succinctly with the statement, "This has really been a guessing game."

Teacher Reactions to the Rank Ordering of Pupils. In some respects ranking the pupils in a class according to their overall achievement, no matter how arbitrary the task might be, causes teachers to go through processes similar to those required for making year-end promotion statements for each of their pupils. Similar criteria must be taken

into account. Nevertheless, with regard to the ranking exercise in this study a large majority of teachers' comments focussed on the differences in the bases of teachers' rankings and the test rankings. Teachers perceived that their general academic rankings had taken into account many more factors than had either of the distributions based on the results of the two tests. Comments were often directed at the positioning of individual pupils in the three ranked distributions. Teachers expressed either pleasure at the coincidence in rankings or surprise at the lack of it. They felt that their rank orderings generally corresponded with those based on the results of the two tests (see List G).

Reaction to the exercise of rank ordering was mixed. One disliked it because it was "so arbitrary"; another stated he "would like to have this done every year." A third stated: "That had to be the worst part of the whole thing. Putting the kids in order nearly drove me out of my mind." A more positive comment was: "The tests reveal that kids are pretty good at reading but are lower in math. Now I might do more on math." But this positive perception of a review of ranked distributions is offset by the following terse statement by a primary teacher:

> How would you use this? What would you do with it? Ranking for academic achievement only takes into account reading and number work. You can't separate the overall development of this level (it's a pity it

> doesn't come in at all levels), art work handwork--all that has a bearing on the child's achievement. It's all right to say academic achievement, but at grade 1 it must include producing a picture and things like that. It's all part of a language and math program which you cannot separate.

Not surprisingly, the consideration of the rank-ordered distributions led teachers to make a number of penetrating comments about the faults and limits of tests. These are included in the analysis in the following section.

Comments About Tests. Most teachers did not comment on the tests that were administered and those who did tended to make their remarks in conjunction with the performance of particular pupils: in one way or another they perceived flaws in a test that produced a misreading of the pupils' true achievement or caused them frustration, confusion, or fatigue. They said some questions were ambiguous; some instructions were confusing, unclear, or strange to the pupils; the "Don't Know" option permitted some pupils to avoid making an effort; some subject matter (such as an American quarter and measurement in inches) was unknown to the pupils, other subject matter had not yet been taught; the variety of operations and concepts that were tested all at one time caused confusion; answers were sometimes contained in the question; the tests required no thinking, no writing of answers.

The number of teachers that commented on the strangeness of the tests and the testing experience to both their pupils

and themselves suggests that almost all the teachers lacked extensive experience with standardized testing. Despite this lack of experience they did not appear to be intimidated by the tests or the test results, but expressed interest in the test results and appreciation of the experience.

Some teachers reacted favourably to the tests because the children had enjoyed them and the whole experience had been a pleasant one. For others, the tests had been helpful and revealing. These teachers indicated that they would actually follow up the test results with deliberate goals in mind, e.g., to re-examine the work of an individual child, or to review methods of assessing pupil achievement. Several teachers, too, stressed the value of test results in providing an objective reading of pupil achievement as a check on teachers' impressions.

Many other teachers, however, revealed a fundamental distrust of a one-time use of standardized tests. The strongest comments in this regard came from primary teachers (see List H).

Personal Factors Affecting Pupil Performance. Teachers' post-test comments about personal factors affecting pupil achievement on the tests clustered in the same four major areas and in roughly the same pattern of frequency as their pre-test comments. In post-test discussion, however, fluctuations in pupil performance was also often mentioned. On

the basis of frequency it ranks close to background factors as an influence on test scores (see Table 5).

Frequency counts of teachers' comments indicate that teachers tend to use group or peer performance rather than specific task requirements in a test as a basis for judging pupil performance. Teachers do not appear to hold constant reference points with regard to the achievement of individual pupils. They appear to alternate between norm-referenced and criterion-referenced judgments.

Primary teachers' comments after the tests were evenly distributed among the three categories whereas the junior teachers' were unevenly distributed. The junior teachers in the sample emphasized work habits more and developmental factors less than their primary counterparts. The number of comments about Background and those about Personality and Social Characteristics declined.

Effort, Attitude, and Work Habits. Teachers in both divisions talked most about effort, attitude, and work habits, as they had before the test. Work habits again predominated over effort and attitude in this category. It was often difficult to relate what teachers were saying about pupils' work habits to specific performance on the tests. In many instances the teachers seemed to be suggesting that good work habits were a sign of stability or dependability and,

consequently, a basis for good results on tests. Teachers tended to register surprise when this proved untrue. Their comments suggest that tests sometimes create unaccustomed environments for individual pupils, environments that variously favour or frustrate the established work patterns of individual pupils (see List I).

Academic Achievement. Teachers' post-test comments about academic achievement tended to be more fully developed and more contextually specific than their pre-test comments. Academic achievement was frequently used to justify corresponding estimated and actual scores at the ends of the distributions or to explain marked discrepancies within the distribution. Teachers observed that test results often reveal capabilities of pupils in specific skill areas which may be obscured by the more general demands of classroom learning activity. They sometimes claimed to have known the real potential of individual pupils as implied by test results despite inaccurate estimates (see List J).

Developmental Characteristics. Comments included in this category suggest that tests magnify the temperamental and emotional characteristics of pupils. While many are speculative in nature, they are clearly grounded in experience gleaned from many months of association with individual pupils. There is a strong suggestion that an individual's performance is often affected by the actions of other pupils

or by extraneous circumstances (see List K).

Background. Teachers seem reticent about discussing background information; their comments are often too sketchy to suggest that they see any direct relationship between background and achievement. Background is more often mentioned as a partial explanation of poor rather than praiseworthy performance. Positive references tend to reflect a teacher's pleasure and support. The variety of viewpoints is evident from the excerpts in List L referring to pupils' home conditions.

Fluctuations in Pupil Performance. Although little evidence of teachers' awareness of fluctuations in pupil performance appeared in the pre-test comments, references to changes in the patterns of pupil performance on a day-to-day basis and over extended periods of weeks or months appeared frequently in post-test comments. Teachers seemed to refer to fluctuations in performance not as a ready rationalization for unexpected or atypical performance but as a discrete characteristic of the performance of particular pupils. They tended to link the characteristic to the temperament and emotional makeup of these pupils. This factor has a strong bearing on the validity of one-time test scores, on teachers' reliability in estimating achievement, and on the advisability of generalized assessment of pupil performance. Teachers encounter a wide variety of changes both daily and

periodically in a classroom (see List M).

In the discussion of teachers' pre-test and post-test comments, it has been shown that these teachers stressed the classroom performance of their pupils in forming their expectations and interpretations of test results. Classroom performance included the pupils' effort, attitude, and work habits, their academic achievement, and their developmental characteristics. Personality characteristics and social skills were not perceived as influencing academic achievement, and background characteristics of individual pupils were seen to affect academic achievement in a limited number of cases only. In fact, teachers rarely referred to sources of information on pupil behaviour outside the immediate classroom setting. They seldom mentioned the opinions of other teachers, local experts or senior colleagues, the Ontario School Records, standardized test results, or the experiences of particular pupils in withdrawal special education or remedial programs. Overwhemingly teachers depended on information gathered in their own classrooms and they exhibited very few traces of doubt about their ability to know and understand, unaided, their pupils' achievement capabilities.

References to developmental or curriculum theory were singularly lacking. If the teachers held these theories, they did not emerge in their comments about pupils' academic achievement. Teachers drew spontaneously, intuitively, unsystematically from a massive fund of information about

each child. From this storehouse of often unrecorded, unclassified, unrelated data, teachers drew those salient characteristics which seemed to bear on the testing task at hand. Teachers talked in practical, not theoretical, terms. They talked about specific individuals in specific situations. By reacting instantaneously and simplistically teachers may be attempting to manage economically and practically the masses of relatively undifferentiated information accumulated about each child. Moreover, the notable absence of system in their comments may be attributable to their recognition of the diversity, in potential and behaviour, among their pupils.

Teachers draw on a wide range of information in estimating achievement and in interpreting test results. These data are consistent with the approach teachers described in Chapter V.

Teachers and children did not, on the whole, find the testing process unpleasant. This reaction, of course, occurred under conditions in which test results could not be used to the disadvantage of either teachers or children.

It can be inferred that teachers came by a great deal of information about their pupils by what is commonly called "observation." However, in explaining their expectations and interpretations of academic achievement, the teachers rarely used the word observation or any form of the verb to observe. In the very few instances when these words appeared, they were used as synonyms for other equally

commonplace classroom words such as watch, listen, supervise, or check. There was nothing in the pre-test and post-test comments to indicate that teachers used the term observation in a theoretical sense to refer to recognized sets of evaluative activities focussed on a selected set of pupil activities. The words, observation and observe, are normal parts of these teachers' vocabulary and do not appear to carry defined connotations of evaluation.

Summary

This chapter has discussed teachers' comments about pupil achievement on two standardized tests, one in reading and the other in mathematics. The comments discussed were made before the tests were administered when teachers made estimates of pupil achievement and after the tests were completed when teachers reviewed pupil scores, compared them to the estimated scores, and reacted to pupil positioning in rank-ordered distributions of scores. The principal points of the discussion are listed below together with interpretations and comments:

1. Teacher's comments indicate that in making their estimates of pupil performance, they considered (1) effort, attitude, and work habits (35% of comments); (2) developmental characteristics (24%); (3) academic achievement (23%), background (12%), and personality-social characteristics (6%). There was little difference between primary and junior teachers in types of comments made.

2. Post-test comments on pupil characteristics related to performance included (1) effort, attitude and work habits

(35%); (2) academic achievement (27%), developmental characteristics (19%), background (15%), personality-social characteristics (3%).

3. In addition to commenting on pupil characteristics mentioned in previous parts of the study teachers noted a new characteristic--"fluctuation" or the tendency to vary widely in performance on a day-to-day basis. Twelve percent of post-test comments mentioned this characteristic.

4. Teachers draw explanations of pupil performance from a massive unsystematized fund of knowledge which is gathered from a wide range of sources.

5. Teachers draw intuitively from this fund of information to explain pupil performance. They tend to draw without pattern or system--the motivating interest seems to be the perceived characteristics of the individual pupil.

6. Teachers' comments indicate inexperience with standardized tests--inexperience with rank ordering, estimating, and "reading" the requirements of standardized tests.

7. Teachers were not intimidated by the tests--possibly because it was just a research project and "didn't count"--also possibly because they view tests as only one limited source of information about pupils.

8. Teachers tend to see standardized tests as one of several means of gathering information about pupil achievement. They tend to view test results as having only limited validity. Standardized tests provide a narrow slice of the full picture of pupil achievement.

7 Teachers Talk About Observation*

Wahlstrom and Danley's study of the Assessment of Student Achievement (1976) concluded that teachers rate observation as their most important source of information about student achievement. A major focus of the present study was to determine if a selected sample of teachers also believed observation to be their most important source of information and to find out just what teachers do mean by the term "observation." Several strategies were used throughout the study to attempt to determine both the meaning and the relative importance of observation in the classroom, and on four occasions the selected teachers were asked questions specifically designed to elicit that information. These questions were asked at the end of Visit 1, at the beginning of Visit 3, and at the ends of Visits 4 and 6. The nature and context of the questions were somewhat different: the first question was completely open-ended without mentioning the term observation at all to see whether teachers would mention it spontaneously, while the last question of the study asked quite specifically for a definition of the term. The various questioning strategies yielded apparently different results. They are described in detail below.

Visit 1: "From the sources of information you have

*Corresponding data are presented in Appendix 5.

mentioned which do you feel is most important and helpful to you in learning about your children?"

It may be recalled that the first interview consisted of the teacher's describing four children in order that a supply teacher could work effectively with them for a month. For every item mentioned about a child, the teacher was later asked, "How do you know that?" In this way the interviewer got some idea of how the teachers came to know their pupils. After all four children had been discussed, the interviewer said: "You have mentioned several sources of information on the children in your class. Which of these sources do you feel is most important and helpful to you in learning about your children?" This question (Phase 3 of Visit 1) was worded in such a way as to elicit a spontaneous ranking of the sources of information the teacher used regularly in the classroom. (See Appendix 5)

More than half our sample (nineteen teachers) mentioned observation as their most important source of information in learning about their children. Thirteen mentioned teacher-child interaction, described as "talking about them" or "listening to them talk to me." Daily work was mentioned by twelve teachers as an important source, six included parents, and four mentioned previous teachers.

Visit 3: "What are the most important ways you get to know about individual pupil achievement?"

On the basis of responses to the questions designed

to arrive at the importance and meaning of "observation" it was found that some teachers described it as the vague, somewhat intuitive and informal process that included watching and listening to children, the process used to form or substantiate impressions or hunches, the results of which were anecdotally recorded, if recorded at all. However, some teachers described observation as including a more structured examination of daily work and daily activities that was routinely marked and often recorded.

Another related discrepancy is noted in the relative importance assigned to observation. In Visit 1, most teachers cited observation as the major source of information about their pupils, whereas in Visit 3 daily work was mentioned most often.

Two factors appear to be leading to the discrepancies in the definitions and reported importance of "observation" in the classroom. One possible influence could have been the changing emphasis of the visits or strategies themselves, leading the teachers to put different emphasis on the various sources of information about children available to them for evaluation. The other source of the discrepancies in the data appears to be the very different semantic interpretations of the term "observation" used by the teachers themselves. These two variables possibly interacted, with different strategies leading to different semantic

interpretations of the term.

During Visit 1 the descriptions of the children were given to aid a hypothetical supply teacher. Although level of academic achievement was the basis for selecting the children described, the descriptions emphasized work habits, interaction patterns, behavioural characteristics, and learning styles perhaps because these teachers were attempting to describe those aspects of each child's behaviour that might influence the teaching/learning process. When asked about the most important source of information "in learning about your children," observation was cited most frequently, possibly because of the many items that teachers had mentioned spontaneously emphasizing behavioural and attitudinal characteristics.

In Visit 3, however, the teachers were asked about their most important sources of information "about student achievement." Daily work was mentioned most frequently (twenty-three times) in this case. The introduction of the word "achievement" may have led to greater emphasis on markable, recordable information. Testing was mentioned twenty-two times, with observation cited twenty-one times. It may also be recalled that divisional differences were evident, with primary teachers frequently mentioning observation and junior teachers mentioning testing more often. But both divisions rated daily work equally. The relative importance

of "daily work" is corroborated by the findings in Visit 4.

Visit 4: "Which of all of the pieces of work is the best indicator of how these children are doing?"

During this visit, the teachers were asked to focus specifically on the work that they had collected as examples of what they regularly looked at to assess student achievement. After the collections of work were examined, each teacher was asked, "Which of all of the pieces of work we've examined today is the best indicator of how these children are doing?" Twenty teachers (thirteen primary, seven junior) suggested the best indicator was the work the children did daily, that is, mathematics, phonics, comprehension, spelling, and other activities characteristic of the day-to-day classroom program. When asked more open-ended questions in Visit 3 a comparable number of teachers, twenty-three, had cited "daily work" as the most important source of information about student achievement.

From the work collection of Visit 4, three primary and five junior teachers pointed to some creative activity as the best indicator of student progress. For the primary teachers creative activity was artwork, while for junior teachers it was usually creative writing. A primary teacher and two junior teachers chose an integrated studies project as the best indicator of student achievement, and three junior teachers said a test was the best indicator. These results do not reflect the earlier finding that nine

teachers mentioned testing as the most important source of information about individual students' achievement. (Appendix 2, Table 1) Three teachers, two primary and one junior, could not select any one piece of work most indicative of pupil progress, but suggested that all work was equally important, or that different pieces of work indicated different things for different children, so that the piece of work that best indicated how a child was doing would vary from child to child. This latter group included two of the teachers who had stressed the importance of observation of the child in daily activities and one later described observation as "everything you do in the classroom."

Visit 6: "What is your most important source of information for assessing student achievement?"

During the last visit with each teacher, this question was again asked to sum up. (See Appendix 5) The emphasis noted during Visit 3 is even stronger in Visit 6 when the question was asked in the singular: most teachers cited "daily work" as the most important source of information for assessing student achievement. This increased emphasis may result from the fact that the intervening interviews dealt primarily with work collections, test scores, and other markable, recordable, reportable information. It is likely, however, that the word "achievement" caused the stress on daily work, because it is evident in Visit 3 prior to any discussion of specific assessment and reporting

techniques.

It appears then that, even when the word "observation" is not specifically mentioned in the question, it is nevertheless rated as the most important source of information for "learning about your children." However, in "assessing student achievement" it is "daily work" and not "observation" that is spontaneously rated as the most important source of information. This finding appears to contradict Wahlstrom's conclusion about the importance of observation in teacher evaluation of student achievement; however, closer examination of the teachers' actual definitions of the term may clarify the apparent discrepancy.

Observation--What does it mean?

The final question asked of the teachers in this study, at the end of Visit 6 follows,

> During this study, observation has been mentioned as one source of information. What exactly do you mean by the word observation?

Until this point in the study, the word "observation" had not been mentioned specifically by the interviewers in order that the teachers would not perceive it as the main focus of the study and would therefore mention it only if it were part of their common repertoire. The success of this strategy may be seen from the comment of one teacher:

> If you had asked me about observation at the beginning, I would have gone on about it

> thinking that's what you wanted me to say. But now I know I can say anything. Most people aren't organized enough to record their observations and use them well.

It was this final question that required the teachers to define the term as specifically as possible, both in general and in personal terms. And it was this question that revealed a discrepancy in the semantic interpretation of the word "observation" that may account for the difference between Wahlstrom's results and the present findings. In our sample, many teachers described observation as the informal, daily, sometimes recorded, and often vague impressions formed while watching children work, play, and interact. These teachers view observation as a process very different from the structured routines of formally marking and recording daily seatwork and/or activities. For example, one junior teacher (who had not mentioned observation at all) stated that "forms of their daily written work" was the most important source of information for assessing student achievement. She explained that she meant "looking in a general way at their daily work and forming a general impression, not a mark." When asked what was meant by the term observation, she responsed by saying:

> I don't know. Did I use it? I suppose it would be the way they did their work. It's probably something I don't use enough in terms of making notes of what I observe and using it later.

Clearly she sees "looking at forms of their daily written work" as something quite different from what she means by "observation." Several teachers, particularly in the junior division, reacted similarly. That is, they defined "daily work" as the day-to-day marking of workbooks, reading, comprehension, spelling, etc. and used the term "observation" to describe the forming of impressions by watching behaviour, work habits, interaction, etc. both in and out of the classroom. One teacher described it as "the things you observe that you don't write down, the things you keep in the back of your mind"; and another as "using your eyes to pick up as much as you can about the child." However, there were several teachers who had also listed "daily work" as their most important source of information for assessing student achievement, and then went on to describe "observation" as "watching kids in day-to-day work and checking work everyday." That is, for some teachers, "daily work" and "observation" are synonymous and interchangeable. This was apparent for several primary teachers who evaluated children on the basis of impressions gleaned from watching children in daily activities and also for several junior teachers who considered marking daily workbooks to be part of their "observation." The teachers who include "daily work" as part of their definition of observation would account for observation's having been so highly ranked in

Wahlstrom's study as the most important source of information for evaluating student achievement. The fact that the word "observation" was not mentioned by the investigators until the end of this study may have accounted for those same teachers' emphasis on the "daily work" component of their so-called observation in assessing student achievement.

Nevertheless, it remains that "observation" is variously defined by teachers in theory and in practice. While some use it to describe their marking and recording of all daily work and activities, many consider it a somewhat vague, intuitive, usually unrecorded and informal process of forming impressions through watching the children; and still others describe it as the sum total of everything that happens. As one teacher put it:

> Observation is really the whole field of evaluation--you can observe a child doing something, or you can observe and compare test results--it's everything! Observation is the only word in the English language that describes all the things you do in the classroom!

8 Teacher-Student Interaction in the Classroom

This chapter reports a field study of teachers engaging in the activity of assessing students. In this portion of the study an effort was made to relate teacher descriptions of evaluation procedures to their interaction with students.

The job of the field researchers was to find out what was happening in a classroom in three elementary schools. The researchers used participant and non-participant observation methods to find out how teachers assessed academic performance.

Method

Entry into the schools was obtained through collaboration with school boards, principals, and teachers. Three volunteer teachers from the schools already involved in the study were asked to allow one researcher to observe their classroom activities. The teachers were told as completely as possible about the nature of the study. They were given every opportunity to assess this request and to decline the invitation to participate. Each field researcher then studied one of these classrooms and schools for a designated period. Each researcher spent approximately thirty days observing one classroom. Usually this involved spending

two or three full days a week in the schools. At least one complete work week was spent in each of the classrooms. In addition each of the researchers participated in one full-day outing with the class. Observation began in April 1978 and continued, in some cases, until the end of June 1978.

The researchers began their study by coming into the school and visiting the selected classroom for several hours and then leaving. The time spent was gradually extended to the entire school day. Generally the researchers participated in assignments, trips, library visits, and recess. The researchers were free to observe what was going on and to move in and out of situations. Rapport was slowly established between the field workers, teachers, students, and principals. Although some notes were taken during class time, most observations were recorded and later transcribed.

While in the classroom the researchers made a continued effort to learn the language of the teacher and school. On a number of occasions they informally interviewed other teachers in the school, the principal, and children. They visited the staff lounge, observed special programs in the school, and made every effort to become an unobtrusive part of daily activities.

The researchers attempted to withhold judgments and suspend preconceived notions in order to allow the patterned

complexity of the classroom to become evident. Because this procedure is possible only to a limited degree, they tried to become aware of each other's biases through meetings and the sharing of experiences. Their task was to shift their emphasis from the researcher's orientation to the stimuli of the classroom while maintaining awareness of the process. One of the researcher's training and interests covered interpersonal relations, another, language use, and the third, social organization. Their subtle sensitivity to each of these areas provided well rounded and rich insights into classroom life.

Field Strategy

A concerted effort was made to grasp and report the process of student evaluation and classroom interaction. Glimpses of this process were noted in fleeting and complex ways. At first these semi-conscious impingements were confusing; later it was possible to put them together and begin to record, organize, and eventually communicate them. When the researchers experienced something that seemed relevant they attempted to "check it out." Checking out feelings, reports, observations, and hunches was a basic feature of the field strategy. Any hunches or hints that grew out of the researcher's background were also potentially useful for finding out about classroom life. The first part of checking something necessitated estimating the plausibility of what was observed in terms of the investigator's prior experience.

If there was the slightest suspicion that the event may not have been accurately observed or interpreted an attempt was made to falsify this hunch by trying to seek contrary examples. This involved trying to understand the context of observations by looking at them from a number of angles. Often the checking-out process consisted of comparing what was presented against what was experienced or directly observed. This procedure was designed to get to "the heart of things" in order to establish trustworthy and reliable accounts of a situation.

The following sections will describe the three schools, classrooms, and teachers observed. The final sections will present and discuss the findings derived from the field investigations.

The Setting

The three elementary schools that participated in this phase of the study were fictitiously named Open School, Red Brick School, and Suburban City School. Each of these schools is located in or around Toronto, Ontario. The number of children enrolled in these settings ranged from four hundred to over two thousand. Two of the schools are near main traffic arteries. One of the schools was built prior to World War II. The other two are ten to fifteen years old. The newest of the facilities is designed according to the open-plan concept.

The implicit or explicit goals of the school are either

articulated by the principal or conveyed through the dealings of school personnel with children and their families. One school's major goal was to bring a "developmental orientation to the classroom." The intent of this phrase can be summed up in the following statement: "When a child is ready to read he will read." In this school teachers were expected to provide a variety of activities that nurture and direct development. Pronouncements about goals and directions seemed to be more readily made in the larger schools. The smallest school lacked an explicit position; its teaching philosophy appeared to be conveyed by a principal who taught speciality subjects in each class and knew something about almost all the pupils.

Teachers

The teachers who participated in this study, fictitiously named Brenda Smith, Paula Green, and Miriam Webster, were women between the ages of thirty and fifty. Although two of the teachers were born outside Canada, all of them were educated at an Ontario teacher's college or the University of Toronto's Faculty of Education. These teachers have been teaching elementary school between two and twelve years.

Classrooms

The classroom observed in an open-area school was one of six that opened onto a common area. The other two classes observed were in traditionally designed schools--

four walls with black or green boards, bulletin boards, and a row of windows on one wall. Each classroom observed had movable desks and chairs, activity centres, and supply drawers. In two of the rooms the teacher's desk was stationary and marked the front of the room.

Children

The number of children in the classrooms ranged from twenty to forty. The grade levels of the classrooms studied were a 1-2 combination, a 2, and a 5. With the exception of the grade 1-2, which was two-thirds girls, the classes contained an equal distribution of boys and girls. Only Suburban City School was attended by children from unilingual homes. Children in the other schools were from a variety of cultural backgrounds. Generally, the children appeared well dressed, rested, and adequately looked after. They probably were from lower middle-class and stable, working-class homes. All of the teachers reported that their classes were made up of students with a typical range of academic abilities, gifts, and problems.

Results

The findings from the field investigation will be presented with general reference to the three schools and specific examples drawn from each classroom. The following question is addressed in each of the subsequent sections: "What goes on in classrooms that can clarify the process

by which teachers assess academic performance?"

Time Constraints, Transitions, and the Curriculum

The organization of the school day reflects the time priorities for curriculum elements established by the teacher. The movement from activity to activity kept the classroom lively. Ms Webster set up her program in such a way that there was very fast movement (2 to 25 minutes) through various parts of the curriculum. Although the work to be done was assigned in relation to various levels of difficulty, some students could not keep up the pace. The ability of students to comply with these time constraints was one source of Ms Webster's assessment of academic achievement.

Another feature of daily organization that is important in understanding how teachers observe and assess children is the transition or the time period in which children change from one activity to another. Included here are changes from whole class to individual-learning activities, trips between rooms (classroom to library, gym to music room), introductions of speciality classes, and going to recess.

Transitions appear to be significant for two reasons. First, they offer the teacher an opportunity to observe children in situations quite different from those in which they are engaged in regular tasks. Second, teachers know that if children can manage transitions smoothly their own job of managing the class is much easier. Thus, transitions

give teachers another perspective on the child that can be used for evaluation purposes.

The curriculum, the tasks that students undertake to learn and the associated teaching strategies, is another aspect of the teacher's reality affecting his or her evaluation of academic performance. Two types of curriculum tasks have been identified: subject tasks and manipulative tasks. Subject tasks are those related to what laymen often expect elementary school children should learn in school: reading, writing, and arithmetic. In contrast, manipulative tasks include playing with Lego Blocks, painting, drawing, music, and drama. Generally both types of tasks are employed in assessing student achievement.

Grouping

All of the teachers observed placed their students in groups according to their ability to complete subject tasks. These groupings organize, manage, and individualize instruction. Grouping for instruction essentially means that children in different groups will be assigned different learning tasks. Performance on tasks is considered in assessing achievement and, under the grouping system, children in one group assigned one kind of task may be assessed in a manner quite different from children in other groups doing different tasks.

Promotion

In June teachers must decide whether or not to promote children to the next grade. Teachers assume the final authority on a child's academic achievement although they may seek confirmation from others, for example, psychological services personnel or parents. The three teachers observed prepared to make this decision by keeping records, but promotion decisions consistently involved more than the mere summation of previously acquired data. In the teachers' discussions both in and out of promotion meetings it became evident that they held as standard a concept of a modal child's performance. The mental picture of pupils that the teacher derived during classroom interaction was placed alongside this standard.

The actual criterion used in promotion decisions is often an estimate of whether or not a child has or will perform at the expected grade level. Poor performance that might improve would likely result in promotion; poor performance that may not improve would likely lead to retention.

The decision-making process involved in the evaluation of academic achievement is a complex one. Moreover, it is not, as is often assumed, entirely rational. The effective employment of intuition and insight is a responsibility and skill associated with the carrying out of most professional activities. Problematic in the specific situation described

above, however, was the erroneous belief expressed by the teacher that it was appropriate to expect student overall performance on curriculum tasks to resemble some sort of a bell-shaped curve. Some students are expected to do very well, the majority are expected to do acceptable work, and a small number are expected to fail.

Models of Child Development

Another important aspect of the teachers' reality affecting the way they assess student achievement is their model of child development. This model of how children grow and learn is derived from all sorts of experience--the experience of being a child, being with children, teaching, common sense, and, to a limited degree, formal conceptual schemas. In addition to trying to learn about the models teachers develop, an effort was made to understand how curriculum demands might influence teachers' concepts of development.

Generally teachers' models of child development only minimally reflected the influence of exposure to formal theories. Psychological descriptions of children were usually provided to explain lack of ability. Such terms as emotional problems and low "basic intelligence" were employed by some teachers to rationalize a child's incapacity to perform as well as his or her classmates. Similarly, sociological explanations detailing the performance implications

of environmental characteristics, such as coming from a poor home or being a new Canadian, were used to rationalize low academic achievement.

Age seemed to be the major category of differentiating children. Chronological age was viewed by many to be a useful way of organizing expectations about children's ability to understand and act reasonably. The teachers seemed to have a concept of what was appropriate behaviour for children at different age levels. Moreover, they erroneously believed that scientific literature supported these notions in terms of specific norms for physical, social, cognitive, and emotional development. A belief was manifest that there is a correspondence within and between these areas and levels of educational attainment. The term maturity was used to characterize this correspondence. Children were judged according to what was deemed appropriate for their age level. Immaturity was a designation applied to those below that level. In contrast, children who were described as "mature" were often those who were more advanced than their agemates. In one class, the pupils classified as immature were those who exhibited disruptive behaviour, delayed physical development, and difficulty with subject tasks. Immature pupils in this class were believed to benefit substantially from manipulative activities. Manipulative tasks were thought to help them develop more interest in subject tasks.

The teachers had a definite conception of a pupil's capacity to perform in the subject and manipulative areas. Capacity is not something that can be empirically seen by teachers. It has to be inferred. This inference process is probably based on information collected and synthesized (seatwork, test scores and so forth) and/or a feeling about students that comes from experiencing them as people. Complicating this inference process is the notion that there is a direct correlation between a high level of ability to attain the objectives set by the school and high capacity generally.

Teachers seem to go beyond available academic information in making judgments of students as people. A pupil believed to have a low capacity for achievement is not condemned. Capacity is perceived as an attribute over which the child has no control. In contrast, a pupil with low motivation is condemned by the teacher because motivation is believed to be almost entirely volitional. The pupil can, therefore, be held responsible for willful acts and can be punished for them.

Teachers' behaviours vary with their estimates of capacity and motivation. The teacher does not attempt to change the child believed to have a low capacity for school tasks because it is generally believed that there is not very much that can be done with such a child. If action to help the child seems appropriate the teacher may not feel able to

undertake it because of the lack of time or training. On the other hand, the child believed to be exhibiting low motivation but high capacity may be seen as a challenge by the teacher.

Conclusion

The definition of the classroom situation held by teachers is important in any effort to understand the process of assessing academic achievement. How teachers view their own role and that of their students is a key factor in the definition of the classroom situation. The teacher's role seems to consist of two main aspects each of which is complemented by an aspect of the pupils' role. First, teachers are expected to instruct and, in turn, they expect pupils to work hard, pay attention, and show enthusiasm and interest. That is, teachers expect pupils to achieve. Second, teachers are expected to manage or supervise classroom activities and, in turn, they expect pupils to be obedient, polite, and well disciplined. That is, teachers expect pupils to accept their authority. Teachers consequently are likely to perceive and evaluate pupils on the basis of both academic performance and classroom behaviour. A conforming student is a "good" student, a student who deviates markedly from the teacher's expectations may be viewed as an "immature" or "wild" student. Pupils who are perceived most favourably are those who, by their actions in class, regularly confirm

the teacher's own definition of the classroom situation.

The observation of classroom interaction described in this chapter revealed seven factors that influence teachers' definition of the classroom situation and, therefore, influence teachers' perceptions of academic achievement.

1. Time Constraints. Teachers must work within certain time limits and, therefore, must prepare and assign to students learning tasks that are of "reasonable length and difficulty." Whether or not a child is able to complete these tasks within the time constraints influences the teacher's perception of his or her progress and achievement.

2. Transitions. A transition is a change, for the students, from one learning situation to another. Teachers expect pupils to complete planned transitions with dispatch. A student who does so is viewed more favourably than a student who does not.

3. Curriculum. Teachers have expectations about the kinds of learning tasks that the "average" student at each age level should be able to complete. Children who are able to meet these expectations are seen as "doing well"; those who are not able to meet them are seen as "having problems."

4. Grouping. Teachers group pupils for instruction according to a variety of criteria. This may mean that all pupils in a group are assigned the same tasks. The degree to which a child completes the tasks assigned to a group, as opposed to tasks assigned on an individual basis, strongly influences the teacher's perception of the child's academic achievement.

5. Promotion. At the completion of each school year, teachers must "promote or retain" pupils; they must classify pupils according to whether or not they are doing passing work. Consequently, some time in the year teachers begin to place student achievement in one of these two categories.

6. Models of Child Development. Each teacher in the study seemed to hold a personal view of how children grow and learn. A child whose development is synchronized

with the teacher's model is seen as "progressing well." A child whose development is delayed may be viewed as "slow" or "immature."

7. Definitions of Teacher-Child Roles. Some teachers see themselves in two roles: they are instructors and classroom managers, and they evaluate each child on the basis of classroom behaviour as well as academic performance. The latter evaluation may bias the former.

9 Discussion, Implications, and Recommendations

In order to examine the nature of teacher interaction and observation practices in the evaluation of student achievement, the present study moved away from the more frequently used behavioural approach (e.g., Brophy & Good, 1974; José & Cody, 1971) and towards a more phenomenological approach to the topic based primarily on a series of in-depth interviews with a sample of classroom teachers. This was a pilot project intended to provide some initial insights into questions arising out of previous research. By discussing these issues directly with the teachers themselves, and by augmenting the phenomenological approach with additional strategies, the research team hoped not merely to answer the questions posed by the Ministry of Education but rather to clarify the issues and to generate additional questions and hypotheses on which to base future research.

The questions which defined the scope of the study are categorized as follows for the purpose of organizing the discussion:

A. The Importance and Meaning of Observation

-What do teachers mean when they rate observation as the most important source of information for assessing student achievement?

B. Collection, Interpretation, and Integration of Evaluative Information

-What role do teachers' expectations of achievement play in decisions on what to evaluate and how to interpret this information?
-What can be said about the quality and coverage of such information?
-How is all evaluative information integrated and reported?

C. Evaluation Strategies and Practices

-Might there be different strategies of evaluation that identify groups of teachers?
-How do practices vary with grade level?
-Do teacher assessment practices stem from identifiable concepts of child development or curriculum?

Each of the data-gathering procedures described in the earlier chapters was designed to contribute to one or more of the focal questions. In addition, the design allowed for the examination of common patterns of results that emerged from two or more procedures. The discussion to follow in this chapter will draw from all of the findings. It will then serve as the base for defining implications and providing recommendations for further research.

Discussion

A. The Importance and Meaning of Observation

-What do teachers mean when they rate observation as the most important source of information for assessing student achievement?

The prime focus of the entire study was the examination of the importance and the meaning of the role of observation in teachers' assessment of children. This question was specifically addressed by several strategies. We will first

consider the findings of the first three visits (Chapters 3 and 4) in which teachers rank observation along with other information-gathering techniques, then discuss teachers' definitions of the term, and, finally, examine the model of the process which was inferred from participant observation in three classrooms as well as from the interview data.

As was noted in Chapter 7, teachers do report that observation is a very important source of information. However, the degree of importance varies with the nature of the information being collected. The question about the importance of information had two different wordings and was asked in the context of different interviews. When the researchers asked teachers to name the most important source of information for "getting to know your pupils," observation was mentioned most frequently. It was said to be not only a part of assessing pupils but also of making judgments about their attitudes, their personal and social characteristics, their present level of development, and their home background. When the emphasis in the interview turned toward "evaluating pupil achievement," then daily work was cited more frequently than observation as the most important source of information.

There was also some variance in teachers' definitions of "observation" elicited by the researchers at the end of the study. Most of the teachers defined observation in terms of assessing specific activities going on in particular

contexts, activities that provided them with opportunities to pick up information about the children in their classes. Individual teachers named some or virtually all the activities teachers could conceivably engage in except the use of teacher-made or standardized tests. Most commonly, "observation" involved looking at or listening to pupils in different contexts. The most frequently mentioned contexts were (1) watching children but not intervening in what they are doing; (2) noting the child's response to instruction, that is, taking notice of the children during the time teachers take deliberate, active steps to ensure that pupils learn; (3) looking at children when classroom work is in progress and teachers are arranging and supervising their learning process. In the latter two contexts, the "watching" and "listening" could take the form of checking work, discussing work with the child, noting answers to questions, and so on.

Some teachers, however, provided definitions of "observation" at a psychological rather than a behavioural or contextual level. This latter group of teachers did not include checking daily work or any other systematically recordable activity in their definitions. "Observation" was not necessarily perceived to be an active, deliberate activity taking place at a particular time. Several teachers talked about observation as an "awareness" that involves

intuitive feelings and emotional judgments. The teachers' personal experience with the child and their memories of these experiences were said to play a role in observation. In other words, these teachers were attempting to define a process in which information about children was integrated or assimilated into an existing conceptualization.

The in-depth classroom involvement by three of the researchers (Chapter 8) provided a different perspective on observation, one which also led to a definition at a psychological level. These researchers attempted to highlight not just the data teachers collect about reading ability, background information, and so forth, but also how these data are made relevant, how they come to function as criteria determining success and failure. The participant-observers attempted to deal with observation as a process through which particular educational identities are constructed. The process of differentiating pupils involves not only the tangible activities described by the teachers themselves but also the intangible aspects that involve the teacher's attributions and definition of the classroom situation. The allusion to "awareness" indicates that the construction of classroom realities is a more complex process than one would expect to find from a mere summation of related activities. It is through the integration of these activities and through teacher definitions or the temporal,

interpersonal, sociocultural, intrapersonal, and ecological dimensions of the situation that teachers "observe" or "know" the pupils in their classrooms.

B. Collection, Interpretation, and Integration of Evaluative Information

-What role do teachers' expectations of achievement play in decisions on what to evaluate and how to interpret this information?
-What can be said about the quality and coverage of such information?
-How is all evaluative information integrated and reported?

The influence of teacher expectations is manifest at several steps in the evaluative process. Chapters 2 and 8 have pointed out that teachers construct practical theories about classrooms and children and that these theories or expectations direct their actions and allow them to make sense of their experience. The following sections will describe how the teachers' expectations exert their influence either directly on the evaluation process or indirectly through the mediation of classroom organization and practice.

It appears that the teacher's concept or schema of what constitutes an "adequate" pupil serves as a standard against which performance is compared. Classroom activities are affected by the teacher's idea of adequacy and may in turn affect it in what appears to be a circular or reciprocal fashion.

Classroom procedures are designed to ensure the availability of information necessary for the test of adequacy but at the same time they may preclude the gathering of other sorts of information. For example, the emphasis on reading and language arts leads to a program in which half or more than half of class time is spent on reading and language activities. The teachers' evaluation practices naturally reflect this bias because much of the information on which evaluations are based is collected as part of day-to-day activity in the classroom.

Similarly, division of children into instructional groups requires an evaluation of some nature. Prior academic achievement must be assessed to justify teaching all group members the same content. Learning style and other factors must also be assessed if the mode of instruction is to vary. Thus classroom organization has an effect on what the teacher knows about pupils.

In part, the teacher's standard of adequacy may be determined by factors outside the classroom as well as within. The questionnaire on collecting and reporting and the actual collection of work (Chapter 4) may reflect institutional or societal beliefs about "the adequate pupil." Whether or not these are assimilated to individual teachers' beliefs, they do shape classroom practices and hence the information base from which student evaluations are derived.

For example, teachers regularly collect information on all aspects of the curriculum, with the heaviest emphasis on what was referred to in Chapter 8 as "subject tasks." That is, all teachers collect information relating to mathematics and reading/language achievements, fewer teachers collect information about social studies, science, art, or other areas. These areas are less universally accepted as basic educational objectives.

The information collected by the teachers varied in content and format according to curriculum area and grade level. "Daily work" samples included artwork, workbooks, and mimeographed work sheets for mathematics and reading/language in the primary grades while artwork seldom appears in junior-level evaluation information, with the products of other curriculum areas contained primarily in workbooks. "Daily work" was more frequently supplemented by test scores in the junior grades. This pattern reflected the pattern of categories found on report-card forms provided by the school boards. Moreover, the use of tests to provide quantitative rather than descriptive information was higher for teachers who were required to report letter grades. Here is a very tangible example of the way in which the evaluative procedure is directed.

The process of evaluation affects the form in which the information is cast. Evaluation has been described as

an adequacy check. If this description is accurate, then teachers may be seeking answers to questions like "Does Lee perform well enough for (X)?" rather than "How well could Lee perform?" This might lead to the child's being underplaced without the teacher being aware of it because this assessment doesn't measure the full range possible. As a consequence of the underplacement, the child could receive educational treatment that placed only limited performance demands on him or her. The child would not be operating at full potential and this in turn could affect the evaluation of his or her other capacities.

Teachers' responses to the questions regarding what information they would want from a child's previous teacher and why (Chapter 3) support this interpretation. Teachers comments reflect their fear of reports that underestimate achievement or performance. They suggest that such reports could be harmful and lead to self-fulfilling prophesies.

Teachers' theories about the nature of children in general affect their treatment of particular children. Predictions of how the children would do on two parts of a standardized test (Chapter 5) showed that teachers may have an implicit belief in some sort of general competence characteristic. Teachers tended to predict that peformance in reading and in mathematics would be related to a greater extent than actual performance indicated. When estimating

test performance, teachers integrate previous knowledge of work habits, temperament, and emotion as well as knowledge of academic skills. The participant-observers (Chapter 8) also found support for the view that teachers have integrated, global perceptions of each of the children. A halo effect operative in a classroom could be another factor that contributes to the placement-evaluation cycle.

Comparisons of teacher predictions and actual scores (Chapter 6) and the teachers' comments showed that expectations play a large role in how information is interpreted. Evaluative procedures that produce estimates congruent with teachers' expectations are accepted rather indiscriminately. Evaluative procedures that contradicted expectations were handled by the teachers in the study by one of two strategies. Sometimes, the results were dismissed as inaccurate or inappropriate. (That is, when the test result did not agree with the prediction the test was usually criticized as invalid.) Alternatively the teacher brought in additional information to explain the discrepancy. Here the teachers' beliefs about factors that potentially affect performance seemed to influence what information was considered. For example, social class membership or family relationships were cited in an attempt to resolve incongruity. The construct of "fluctuation" in day-to-day performance perceived as a personality trait of some pupils was another explanation

cited.

The examination of the work collections (Chapter 4) gave the teachers a chance to comment while examining children's "products," that is, test results, workbooks, seatwork, artwork, and so on. From these comments, it is fairly apparent that the evaluation was based not just on the product per se but rather the item was evaluated in the context of what the teacher already believed to be true about the child, the teacher's view of the child's strengths, weaknesses, attitudes, and understandings. Like test performance, the products of daily work that confirm the teacher's belief were accepted at face value, while products that contradicted the prevailing belief necessitated further consideration on the part of the teacher. The process has already been described above in our discussion of test performance.

Reporting is affected by teachers' expectation. Responses to the questionnaire on collecting and reporting (Chapter 4) showed reporting procedures vary, depending on both grade level and board policy. The teacher's perception of a child may or may not be translated into a letter grade, depending on the institutional requirements. However, neither letter-grade reporting nor written or verbal anecdotal reporting necessarily mirrors test scores in a precise way. It appears, from both the responses to the questionnaire and from the actual procedures examined through

participant-observation, as well as the teachers' interpretation of the standardized test scores, that it is the teacher's perception that tends to be reported, not test scores, unless the two agree. While tests provide marks which could be used to justify the grade or comments the teacher planned to place on the report card, the marks may also be interpreted in the light of other information.

The quality of the coverage is hard to assess. There are some data which indicate that teachers' estimate of their own evaluation competence affects the amount of information collected. Several teachers expressed concern about the quality of their observational and recording skills. It was not uncommon to hear a teacher say, "I wish I had more time to record some of my impressions." One teacher wished for a computerized tape recorder that could tape her evaluative thoughts based on observations as she walked around the room daily and would keep these anecdotal whispers on file to be recalled at report-card time.

According to the teachers' own report, the coverage of non-academic information may be weak because teachers feel they lack skills in collecting and recording this sort of information. In the creative arts where the marking tends to be subjective, teachers are not as confident and the coverage is sparse. The quality of general observational information is varied; some individuals use it far more

extensively than others.

The coverage of evaluative information in the academic areas appears to be substantial and the quality of the information may be better, or at least the teachers show more confidence in these areas. Teachers predicted children's test performance with a fair degree of accuracy even in unfavourable situations (Chapter 5). That is, when they were given a brief exposure to test items, which may or may not be a representative sampling of the comparable curriculum domain, teachers' predictions of performance were at times astonishingly precise. These occurred despite, or maybe because of, the fact that they were based on expectations of group performance rather than specific test demands on individual achievement. Their predictions tended on average to be better for reading than for mathematics but any given teacher might be a good predictor on one but not the other.

The integration of information appears to be a continuous, almost organic, process, proceeding in small increments. Teachers may take a child's performance in one area to use as a bench-mark for estimates in other domains. It is unlikely that there is any period, except perhaps at the very beginning of the contact with a particular child, when the teacher begins with a fresh slate and performs the equivalent of a summation of discrete pieces of information.

Even here, if we can refer back to the findings of Chapter 3, it seems the classroom climate idealized by the teacher provides the structure into which new students are placed and through which students come to be known. The procedure as described provides a stability to the teacher's beliefs. Beliefs and expectations determine practices and these in turn determine what can be known about any given child.

C. Evaluation Strategies and Practices

-Might there be different strategies of evaluation that identify groups of teachers?
-How do practices vary with grade level?
-Do teachers' assessment practices stem from identifiable concepts of child development or curriculum?

There are some notable differences between primary and junior teachers. In part they differ from each other with respect to what they want to know about children. The in-depth interviews (Chapter 3) revealed that, while all these teachers are interested in both the process and the product of academic instruction, primary teachers emphasize process evaluation (that is, learning as it is happening), and junior teachers put a greater emphasis on product evaluation (that is, the outcome of learning). The findings are by no means conclusive although further support for this difference appears in the discussion on recording and reporting (Chapter 4) and also in predictions of test performance and discussion of discrepancies (Chapters 5 and 6).

This difference in emphasis carries over to information-

gathering activities and to the contexts in which these activities occur. Primary teachers mentioned observation by watching and by direct instruction more frequently than junior teachers did. Junior teachers mentioned observation by managing learning more frequently that did primary teachers. There is a greater use of teacher-made tests in the junior division, and, not surprisingly, they are considered a more important source of information about pupil achievement by junior teachers than by primary teachers.

The definition of the word "observation" also differentiates two groups of teachers: those who define it in behavioural, situational terms and those who attempt to delineate the psychological processes involved in knowing children. More primary teachers gave the latter sort of definition, but some junior teachers were also in this category.

There is some individual variation in what teachers consider to be important information. The evidence that emerged from the questionnaire on collecting and recording of information and was substantiated by the work collection (Chapter 4) showed that a small number of the teachers appear to form more complex, more tightly integrated evaluations of children than other teachers in the study. Their evaluations are based not only on actual achievement but also on developmental dimensions. They seemed to look at

"the whole child" and had difficulty pointing out one piece of work that best indicated how the children were doing. This group of teachers was diverse in all other characteristics including the grade level they taught.

Aside from the comments of this group and of a few primary teachers who referred to low-achieving children in developmental terms, neither the in-depth interview (Chapter 3) nor the work-product examination (Chapter 4) showed much evaluation activity that might be based on "developmental" concepts. This suggests, therefore, that most assessment practices stem from the curriculum. Concepts of development may, however, play an important part in higher-level decisions about curriculum content. It was found through participant-observation (Chapter 8) that the Ministry guidelines on curricula filter down through the educational hierarchy to the classroom, where the teacher is charged with the implementation of these selected learning tasks. Thus, at least indirectly, child-development concepts affect educational practice.

All teachers have notions of the sequence of learning tasks that children should complete during the school year. Children are judged as advanced, average, or low achievers depending on how well they are able to complete these tasks. Thus, these teachers apparently have developed some implicit normative standard with respect to learning tasks and it may

be that the comparative label they assign a child as a result of curriculum achievement carries over and is interpreted as indicative of general ability and development.

Some teachers take a behaviourist position. The role of positive reinforcement in learning was mentioned. Certain children are perceived to "need more encouragement from the teacher" than others. Different practices may be established for the child believed to be a passive learner from those established for an active, self-motivating, self-organized child.

Several teachers alluded to "self-concept" when they talked about children. There was an implication in these responses that it was important to have children develop "good" self-concepts. A consequence of having a good self-concept is that the child will be "confident with others" and this would have an influence in the learning situation. Interpretation of evaluative information may be biased by the teacher's perception of a given child's self-concept and by whether the teacher views "self-concept" as a cause or as an outcome of academic achievement.

Implications

The analysis of evaluation has indicated unquestionably that it is an extremely complex process. It involves inferences based on inexplicit information drawn from the activities teachers refer to as "observation" as well as more

explicit, formalized test or test-like information.

We could continue to pretend that objective evaluation is possible and rationalize our findings as examples of "measurement error." Alternatively, we can be realistic about this inference process and use our understanding of the process and the factors that influence it to improve present evaluation practices. We suggest that this can be done through three channels: first, teacher education, second, policies guiding educational practice, and, third, education of users of educational services, the general public.

Teachers are generally unaware of and unprepared for the complexity of this part of their work. The emphasis in most teacher training programs is on teaching. Relatively little time is spent on evaluation. This does violence to our widely stated beliefs that good teaching must begin where the child is and must be based on an understanding of his or her needs, capacities, and achievements. Evaluation must be part of pre-instructional planning if instruction is to produce optimal results. Evaluation should be given more weight in teacher training programs, both at pre-service and in-service levels.

If our analysis of evaluation processes is correct it follows that improvement of evaluation procedures will not result merely from the addition of more "methods"

courses. Indeed we must begin by helping teachers begin to develop more accurate conceptualizations of what children and learning are all about, of the intrinsic and extrinsic factors that affect the learning process, of the reference points against which individual differences can be considered without distortion. This would provide teachers with a structure around which they can more effectively organize their experience. It would direct their attention and shape their perceptions. It would also provide them with a common vocabulary and set of definitions that could be utilized for communicating their perceptions.

In addition, we should provide teachers with a variety of information-gathering methods. If their understanding of children leads them to pose certain questions, they should be skilled in the techniques that will allow them to find answers. A part of this training should sensitize teachers to the scope and the limitations of various information-gathering tools ranging from casual observation to standardized tests.

We need to help teachers develop skills in the integration of various pieces of data. This could take the form of training in intuitive-integrative processes, of making these processes accessible to conscious examination or teaching how to use external sources, such as professional consultation, computerized diagnostic systems, and so on.

These various types of training should help teachers understand the relationships between pupil characteristics, teacher practices, and learning outcomes. With this understanding they may avoid the unsystematic selection of explanatory information some teachers appear to use in evaluation. It could also help prevent disappointment at finding that universal achievement is not necessarily a by-product of even the desired classroom climate.

A second channel through which evaluation practices can be improved is the classroom. Varying the demands placed on the classroom teacher should make it possible to alter classroom practices and hence evaluation procedures. Teachers must be given time to carry out as much "watching and listening" as they need, to reflect on what they've learned, to decide what they'll do next.

Teachers could be more motivated to evaluate effectively if the administration values individualized programs based on individualized assessment. The form of evaluation should change as programs are based on children's actual strengths rather than on minimal adequacy or on perceived weaknesses requiring special treatment.

Teachers could be guided into improved evaluation practices if institutional expectations of what is to be recorded and reported were altered. Reporting formats were shown to be powerful directive instruments and can be used to the

benefit as well as to the detriment of all the participants in the educational process.

Finally, we might improve evaluation practices by educating the general public. As public and, therefore, institutional demands alter, so will the process of evaluation. The public needs to understand more about the nature of the evaluation process so that teachers need not be apologetic about using intuition, expectation, and inexplicit criteria. Teachers need the sort of support that comes from public trust of their ethics, their expertise, and their professional self-scrutiny. Good practice should not be reduced to a naive, mechanistic accountability model reliant on test results alone or to a naive, humanistic model that discredits all use of formal tests.

Not only should the public understand the process of evaluation, but it also might profit from a better explication of the function of evaluation. It seems likely that the objective towards which teacher practices are directed is the preservation of the ecosystem of the classroom. Children are therefore evaluated in terms of how they relate to this system, as well as on their individual academic achievement. Because this situation is not always obvious, there is some conflict and discrepancy between the information reported by the teacher and the information that parents think is important.

Suggestions for Further Study

In the course of carrying out this study, our understanding of the nature of evaluation increased but at the same time we became more aware of certain gaps in our knowledge, of assumptions that had shaky foundations. The following section will translate these into researchable questions. They will be presented in categorical groupings based on content differences.

Category A. Questions relating to classroom concerns. These questions relating to teacher evaluation procedures and their effect on classroom practice can be construed as direct extensions of the present study.

(a) What are the differences in the ways teachers observe and describe children who they perceive to be high, average, and low academic achievers? How does this affect classroom practice?

(b) Can we develop descriptive models of the ways in which individual teachers perceive children, of those aspects of children that are most salient to teachers, those aspects that are valued or at least commented on? Can we identify categorical differences in the prevailing belief system of teachers? How might these affect evaluation and teaching?

(c) Can we identify more specifically the factors that contribute to the development of teachers' perception of children in their classrooms so that we can design

training experiences that might influence or alter them?

(d) Many teachers appear to assume that children perform equally well across subject divisions. How does this affect evaluation and teaching?

(e) How accurate are teacher judgments in non-academic areas and what are the implications thereof?

(f) Can we analyse the relationship between competence in teaching and evaluation? Each teacher tends to be effective in evaluating some domains but not others. Is this related to teaching skill or teaching style?

(g) In each classroom the test performance of some children is substantially over- or under-estimated. Do these children, whose scores don't seem predictable by their teachers, differ from their peers in any identifiable ways?

Category B. Questions relating to the development of evaluative tools. From the vantage points of the participating teachers and the investigators, there appeared to be a need to provide teachers with tools and strategies that would permit them to carry out the task of evaluating pupils more efficiently and confidently.

(a) Individual classroom evaluation systems appear to be functional, that is, teachers collect information immediately relevant to the essential decisions they make in the classroom. If more standardized evaluations are desirable

can we develop instruments that reflect more closely the concerns of the classroom teacher rather than the intuitions of the test designer?

(b) How can objective testing be incorporated into classroom operations as an additional source of information about levels of performance?

(c) Can we develop some practical means for noting and recording data about aspects of achievement other than reading and mathematics? This could include assessment of creative writing, oral language, art, music, physical education, and so on. Can we develop some practical means for noting and recording information other than achievement? This might include assessment of attitudes, effort, work habits, personal and social characteristics, development, preferences, and values.

(d) Can we devise systems that provide for the immediate translation of test information in a format to guide classroom decisions? One example would be a verbal translation of different test-score profiles into instructional prescriptions. Can such a format be developed from existing standardized tests? Can we develop new tests to give us reports in a descriptive-prescriptive format?

Category C. A question dealing with general policy on evaluation in the schools.

What are the implications of the results for various

accountability systems in education?

Conclusion

In 1892, William James told teachers that, "The art of teaching grew up in the classroom out of inventiveness and sympathetic concrete observation." We hope that by examining and attempting to explain the "sympathetic observations" carried out by our participating teachers, we will have made some additional contributions to their artistry, and to the artistry of present and future teachers; indeed that was the underlying purpose of this study. A clearer understanding of what is entailed in this aspect of the art of teaching will allow educational resources to be used more effectively and efficiently.

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Appendix 1

Table 1. What teachers tell about their children and how they obtain this information: Proportional response frequencies

Tell me about a child in your class	How do you know that?							
	Watching	Direct instruction	Managing learning	Beyond the classroom	Pupil initiates interaction	Special times & events	I don't know	Total
Attitude, Effort and Work Habits	13.7* (14.1,10.5)	10.0 (11.6, 8.2)	3.7 (2.5,5.5)	1.1 (1.2,1.1)	4.1 (3.8,4.0)	0.9 (0.9,0.6)	0 0	33.5 (34.1,32.6)
Academic Achievement	7.2 (8.7,5.8)	9.3 (9.6,8.9)	5.1 (3.3,8.6)	1.2 (0.8,1.6)	1.2 (0.7,1.5)	1.1 (0.6,1.6)	0.1 (0,0.1)	25.2 (32.7,26.3)
Personal & Social Characteristics	13.6 (14.1,11.8)	2.1 (2.1,2.1)	0.5 (0.7,0.2)	1.1 (1.2,0.9)	1.1 (1.3,0.8)	0.3 (0.4,0.1)	0 (0.1,0)	18.8 (19.9,15.9)
Development	7.9 (8.3,7.4)	3.2 (3.5,2.9)	1.3 (1.0,1.7)	1.4 (1.2,1.5)	0.9 (0.7,1.0)	0.7 (0.3,1.2)	0	15.4 (15.0,15.7)
Background	1.5 (1.8,1.0)	0.2 (0.7,0.4)	0.1 (0.1,0.2)	3.7 (3.4,4.0)	0.4 (0.3,0.5)	0.5 (0.7,0.2)	0	6.4 (7.0,6.3)
Total	44.1 (47.2,40.9)	25.2 (27.5,22.7)	11.0 (7.5,14.7)	8.6 (7.9,9.3)	7.5 (7.1,8.0)	3.4 (2.8,3.9)	0.3 (0.1,0.5)	

*In each cell the top number refers to the percentage of the total set of responses (n = 3,013). The first number in the parentheses is the percentage of primary teachers' responses (n = 1,557), the second number is the percentage of junior teachers' responses (n = 1,456).

Table 2. What teachers want to know about incoming students and why: Proportional response frequencies

What do you want to know?	Why do you want to know?					
	Problems of entry and placement	Implications for instruction	Child's reaction to entry and placement	The child	Home	Total
Academic Achievement	21.9* (22.0,21.8)	10.8 (12.6,8.8)	4.7 (5.2,4.2)	5.3 (4.8,5.9)	0.6 (1.1,0.4)	43.3 (45.7,41.4)
Personal and Social Characteristics	3.0 (1.1,5.0)	2.2 (6.7,8.8)	7.7 (1.1,3.3)	3.0 (1.9,4.2)	1.0 (1.9,[illegible])	16.9 (12.7,21.3)
Background	3.0 (3.9,2.1)	1.6 (0.7,2.5)	3.8 (2.5,5.8)	1.6 (0.6,2.5)	5.9 (5.9,4.7)	15.9 (13.6,17.6)
Attitude, Effort and Work Habits	3.4 (2.9,3.8)	5.7 (7.1,3.8)	3.8 (4.5,2.1)	2.0 (3.0,0.8)	.4 (8,.8)	14.8 (17.5,11.3)
Development	4.7 (4.8,4.6)	2.4 (3.0,1.7)	1.4 (1.1,1.7)	0.6 (1.1,0)	0.2 (0,0.4)	9.3 (10.0,8.4)
Total	(34.7,37.4)	(24.5,20.1)	(20.0,22.6)	(11.4,13.4)	(8.8,6.3)	

*In each cell the top number refers to the percentage of the total set of responses (n = 508). The first number in the parentheses is the percentage of primary teachers' responses (n = 269), the second number is the percentage of junior teachers' responses (n = 239).

Table 3. What teachers prefer to find out for themselves about incoming students and why: Proportional response frequencies

What would you rather find out for yourself?	Why would you rather find out for yourself?						
	Not much point in hearing from others	Better not to know	Teacher affects behaviour	Environment affects behaviour	Home affects behaviour	Others	Total
Attitude, Effort and Work Habits	6.9* (8.1,4.8)	11.2 (12.2,9.6)	11.2 (13.5,7.2)	6.9 (6.8,7.2)	0.9 (1.4,0)	2.6 (4.1,0)	39.7 (46.1,28.8)
General Statements	9.5 (6.8,14.3)	8.6 (6.8,11.9)	5.2 (5.4,4.8)	3.4 (4.1,3.4)	0 (0,0)	0.9 (1.4,0)	27.6 (23.1,33.4)
Academic Achievement	8.6 (9.5,7.1)	1.7 (2.7,0)	0.9 (0,2.4)	0.9 (1.4,0)	0	0.9 (0,2.4)	12.1 (13.6,9.5)
Personal and Social	2.6 (0,7.1)	3.4 (0,9.5)	0	2.6 (2.7,2.3)	1.7 (0,4.8)	0	10.3 (2.7,23.7)
Background	0.9 (1.4,0)	1.7 (2.7,0)	1.7 (2.7,0)	0.9 (1.4,0)	4.3 (5.4,2.4)	0	9.5 (13.6,2.4)
Total	28.5 (25.8,33.3)	26.6 (24.4,31.0)	19.0 (21.6,14.4)	14.7 (16.4,11.9)	6.9 (6.8,7.1)	4.4 (5.5,0)	

*In each cell the top number refers to the percentage of the total set of responses (n = 116). The first number in parentheses is the percentage of primary teachers' responses (n = 74), the second number is the percentage of junior teachers' responses (n = 42).

Appendix 1

List A. Categories: Tell Me About Four Children (See Table 1)

I Attitude, Effort and Work Habits: The child as a learner in school.

Eagerness to Learn

- He is keen to learn.
- She is always picking up a book and wanting to read it.
- She is proud that she can read.

Quality of Effort

- . . . completes assignments properly.
- . . . has messy work--won't look back over it.
- . . . tries to do his best.

Style of Learning

- . . . learning is easy for him.
- . . . needs encouragement from the teachers as he is working.
- He doesn't grasp new ideas quickly, you must go slowly.

Willingness to Work for the Teacher

- . . . will work for you.
- . . . can be trusted to work cooperatively in a group.
- . . . wants to do as the teacher asks.

II Academic Achievement: Present level of specific skill or discipline.

Reading, Spelling and Printing

- He reads a great deal.
- . . . knows vowel sounds.
- . . . forms letters well.

Mathematics

- . . . recognizes numbers easily.
- . . . is able to count in 1s, 5s, and 10s.
- . . . solves problems with frames easily.

Appendix 1 List A (continued)

Art, Music

- . . . enjoys painting.
- . . . skilled in artwork.
- . . . plays instrument well.

III Personal and Social Characteristics: Personality, interests and relationships.

Personality

- . . . a talkative child.
- . . . happy-go-lucky.
- . . . aggressive/timid.

Interests or Preferences

- Likes or dislikes school.
- . . . likes to play soccer.
- . . . likes to talk to the teacher.

Interpersonal Relationships

- . . . appreciates the feelings of others.
- . . . blames problems he creates on others.
- . . . others rely on him.
- Has many/few friends.

IV Development: Present level or rate of growth with respect to physical, behavioural, verbal, or psychological attributes of children.

Physical Dimensions

- . . . a big, heavy-set lad.
- . . . the smallest in the class.
- . . . an attractive child.

Behavioural

- . . . an active child.
- . . . always moving or doing something.
- . . . moving and tumbling are difficult for him.

Verbal

- . . . good at discussion--can express ideas.
- . . . uses slang.

Appendix 1 List A (continued)

Psychological

- . . . has a good self-concept.
- She is confident of what she does.
- . . . doesn't feel self-conscious when working with puppets behind the screen.

Rate of Progress

- She is progressing faster than the rest of the class.
- He is progressing much more quickly now than in the fall.
- His work habits have improved drastically this term.

V Background: The relationship of the home to the school and the child's attendance at school.

The Home

- The family is intellectual.
- French is spoken in the home.
- Mother is sympathetic and cooperative to teacher's point of view.
- Father knows about trucks; therefore, Vincent knows about trucks.

Attendance

- . . . is often late for school.
- . . . takes the school bus and can't stay after school.
- Father had a heart attack recently and Mary has been away a great deal.

Appendix 1

List B. Categories: How Do You Know That? (See Table 1)

I Watching: Teachers learn about pupils by looking at them in different circumstances. "Looking" means watching children and not intervening in what they are doing.

- . . . watching him during singing period.
- . . . observing him in a group and checking the results he comes up with.
- . . . in gym, . . . will do what the group decides.

Teachers draw inferences about children on the basis of what they see. Responses to the "How do you know?" question were combinations of ways of looking at children and inferences drawn from these observations.

- . . . thoughtful toward other kids--helps others in class.
- . . . timid about what she can do--tries to rely on others.
- . . . boy crazy--always chooses boys outside.

II Direct Instruction: Teachers learn about pupils during the times teachers take deliberate, active steps to ensure that pupils learn. The child's direct responses provide the teacher with the information needed.

Direct Instruction

- . . . when given instructions, he can follow them.
- Two or three times per week the students read to me.
- When I teach, it is in a group on the floor--it's easy to spot the good workers.
- In any game-oriented P.E. session I teach--he is very keen.
- . . . new work--he catches on easily.

III Managing Learning: Teachers learn about pupils when classroom work is in progress and teachers are supervising, checking to see if tasks are completed, and testing to determine levels of achievement.

Daily Checking of Work

- I don't mark every question, but I know.

Appendix 1 List B (continued)

- . . . daily checks of seatwork--I have a skill chart and note how well they have done.
- . . . I make sure I see it.

I Set Standards for Their Work

- What I am looking for, I get.
- I have expectations as to what a finished product should look like.
- I encourage full pages.

Classroom Tests

- . . . weekly spelling dictation.
- I give quizzes.
- A test on a number of things throws him right off.

I Compare One Subject/Activity with Another

- . . . science and health projects, equally well done.
- . . . methodical in her approach to assignments in both math and reading.

IV Information Beyond the Classroom: Parents and others in the school are sources of information that assist teachers in knowing about pupils.

- His mother came in and we talked.
- I have checked with the public health nurse.
- . . . written reports from other schools--O.S.R.'s.

V Pupil Initiates Interaction: Teachers learn about pupils when children act to gain the teacher's attention.

- The pupil asks me for things to do.
- He volunteers to run errands.
- Ignoring him doesn't help--he wants constant attention.

VI Special Times and Events: Teachers learn about students on particular occasions.

- I use standardized tests at the beginning of the year to make up my reading groups.
- He is good with supply teachers.
- Always comes in with a big grin on her face--gives you a big hug.

Appendix 1 List B (continued)

- He was sick--didn't smile as much as before, I asked if there were something wrong.

Appendix 1

List C. Categories: Why Do You Want to Know? (See Table 2)

I The Child: This category includes all statements which indicate that teachers are seeking information in order to know the child more fully. Major areas with illustrative excerpts are:

To Gain an Idea of the Type of Child

- . . . lets you know how settled he is.
- . . . written work tells about mental state, inner maturity.
- I will know about the child's self-image.

Indicates Child's Interests and Talents

- . . . might be helpful in selecting books.
- Then I will be able to relate to him.
- We have a lot of activity groups, her interests might relate to them.

To Know the Child: Present Achievement and Learning Style

- Where is her ability compared to other children?
- Does he take a long time to deal with routine things?
- Maybe the child lacks motivation.

II Problems of Entry and Placement: Includes statements which show that teachers are seeking information in order to obviate any problems connected with the child's initial placement in the new program.

- Where is she in relation to the other children, so I can help.
- So I can fit him into one of my reading groups.
- I give spelling tests at the beginning of the year and from that I put them into spelling groups.

To Know Where to Place in the Social and Physical Setting

- The socially mature child can handle responsibility--I may delegate.
- If vision is a problem, . . . put at front of room.
- Socially immature, may need special placement.

Appendix 1 List C (continued)

To Gain an Idea of the Type of Program the Child Came From

- You know they have covered it, not just forgotten.
- To see what he has done (samples of work).
- My class is teacher-centred, transfers from a child-centred room are at a loss for about a month.

May Have to Give Special Consideration

- To be able to deal with problems right away or have other people deal with them (handicaps, etc.).
- Counselling may be needed.
- Some children have special day-care arrangements you have to know.

III Implications for Instruction: Teachers look for information in order to know how to gear the classroom instruction and assignments to the child's individual needs and abilities.

So that Teaching Can be Structured to Deal with Strengths and Weaknesses

- . . . what to know if I have to cover it individually or can he work with one of my groups.
- So I can get him before he does seatwork improperly.
- To know what to teach or reteach.

Important in Assigning Work

- So he won't be hit with something inappropriate.
- So he can work with paint (e.g., asthma).

To See How Much Attention the Child Requires

- To know what I will have to do to help.
- Will teacher time be needed?
- If I know the child works well. I have one way of relating, while if she had difficulty, . . . would have to give extra caring, praise.

Helps Relate the Child to My Understanding of How Children Learn

- . . . child must be able to think before he can write.

Appendix 1 List C (continued)

- Comprehension skills follow through in reading and language use.
- Children have difficulty developing their imaginations (T.V. is bad, I encourage them to write stories).
- If you have a shy child, you have to figure some way of drawing him/her out.

To Set Expectations for Achievement

- So you can develop realistic expectations.
- To know what expectations for the child are possible.
- How much should I be pressuring them to come up with things I might expect?

IV Child's Reaction to Entry and Placement: Teachers are seeking information in order to ensure the smoothest possible integration of the child into the new class.

- So you can keep an eye out for trouble (forewarned is forearmed).
- If he's hyper, I can handle it, but I definitely can't handle medical problems.
- It's a way of avoiding confrontation.

To Help the Child Adjust

- So he will feel at home.
- If the child is sensitive to certain issues, I can avoid conflict.
- She will feel comfortable if she sees a familiar reader.

To Avoid Possible Difficulties for Rest of the Class

- For class harmony, if child tends to be argumentative.
- If child does not share in group activities, I would supervise.
- If there is a behavioural problem, catching it in the beginning can save trouble.

Appendix 1 List C (continued)

V Home: Teachers want certain information in order to understand the child and the home situation "in case something happens to the child at school."

- It may help in understanding certain problems that may develop.
- If child suddenly goes off work, it could be due to family upset.
- Feeding and sleeping, important as to how he will get along in school.
- To avoid embarrassment and upset with the family.
- Shouldn't make unrealistic demands on family.
- If home is not supportive, nothing can be done; all efforts lost.

Appendix 1

List D. Categories: Why Would You Rather Find Out For Yourself? (See Table 3)

I Better Not to Know in Advance: Teachers do not want to know too much about a student transferred to their classrooms for fear of forming inappropriate expectations about the child's behaviour and learning.

- I have read studies, what you expect is what you get.
- . . . child must be given a fair start.
- It's a delicate area, I wouldn't want to hear gossip from others.
- I don't want to prejudge.

II Not Much Point in Hearing From Others: Teachers indicate that information from others may not be reliable and valid. Teachers suggest that their own observing is the most efficient way for them to learn about pupils.

- If you watch carefully, you'll know in a day or two anyway.
- My own observations are more trustworthy.
- What I call average may not be average for another teacher.

III Environment Affects Behaviour: Teachers would rather find out for themselves because their own classroom and school are unique. Thus, teachers feel they should wait and see how the transferred child reacts to the new situation.

- The situation may be different in our school.
- It depends on the atmosphere in the room.
- It depends on the class, he may be top in one room and not in another.

IV The Teacher Affects Behaviour: Teachers would rather find out for themselves because their own relationships with children are unique. Teachers feel they should wait and see how the transferred child reacts to them.

- Because he may not work for the other teacher, yet will work for me.
- Maybe it's the other teacher's fault--he might get along with me.
- I want to see how he behaves with me.

Appendix 1 List D (continued)

V Home Affects Behaviour: Teachers want to know about the home because things happening at home affect a pupil's behaviour. Teachers seem to prefer to find out about the home themselves.

- Sometimes he will behave miserably because of something that happened at home.
- It could be an unhappy home.
- She could be having problems with siblings.

Appendix 2

Table 1

Summary of Responses: Reflections Visit 3

SOURCES OF INFORMATION		ORDER MENTIONED 1st	2nd	3rd	4th	TOTAL	BY DIVISION
DAILY WORK	P	7	4		1	23	12
	J	4	7				11
TESTING	P	2		6	1	22	9
	J	7	3	3			13
OBSERVATION	P	6	5	3		21	14
	J	2	1	3	1		7
DISCUSSION	P	1	4	2	1	16	8
	J		2	4	2		8
OUTSIDE CLASS	P		1		5	12	6
	J	1	1	3	1		6
PREVIOUS RECORDS	P				2	5	2
	J				3		3
OTHER	P	1					2
	J	1		1		3	1

P - Primary
J - Junior

N = 32 (16P, 16J)*

*Note--The data represent 32 teachers; the reflection sheets for one interviewer (4 teachers) were inadvertently unrecorded.

Table 2

TEACHER'S CODE_____

COLLECTING INFORMATION					RECORDING INFORMATION		
(A) WHAT INFO DO YOU COLLECT (WHAT WAS SAID QUESTION 1)	(B) DETAILS OF INFO COLLECTED	(C) HOW DO YOU OBTAIN THIS INFO A & B	(D) HOW OFTEN? (C)	(E) WHY DO YOU COLLECT (A) QUEST. 2	(F) HOW RECORDED (QUEST. 3)	(G) HOW OFTEN RECORDED	(H) SPECIMEN OR DESCRIPTION OF RECORD FORMAT

Table 2a

TEACHER CODE _____

REPORTING

(A) TO WHOM (QUES. 8 & 9)	(B) WHAT INFORMATION (WHAT WAS SAID QUESTION 9)	(C) DETAILS OF INFO REPORTED	(D) WHEN REPORTING	(E) WHAT FORM DOES REPORTING TAKE	(F) SPECIMEN OR DESCRIPTION	(G) WHY

Table 3

Number of Primary and Junior Teachers mentioning "Observation" in Visit 3, Phase 1

	Observation Mentioned	Observation not Mentioned	Total
PRIMARY	14	2	16
JUNIOR	7	9	16
TOTAL	21	11	32

$X^2_{(v=1)} = 6.76$ $p < .01$

Table 4

Number of Primary and Junior Teachers mentioning "Testing" in Visit 3, Phase 1

	Testing Mentioned	Testing not Mentioned	Total
PRIMARY	9	7	16
JUNIOR	13	3	16
TOTAL	22	10	32

$X^2_{(v=1)} = 2.32$ $p > .05$ N.S.

Table 5

Results of Questionnaire on Collecting Information about Student Achievement

WHAT INFORMATION IS COLLECTED		NUMBER OF TEACHERS WHO COLLECTED INFORMATION	DAILY WORK	TESTS	OBSERVATION
Mathematics	P	36	18	9	5
	J		18	16	1
Reading	P	34	18	9	8
	J		16	12	3
Language	P	21	8	0	0
	J		13	11	0
Social Studies Science, and Projects	P	19	3	0	3
	J		6	11	0
Work Habits	P	16	0	0	10
	J		0	0	6
Arts	P	15	10	0	0
	J		5	0	0
Creative Writing	P	13	9	0	0
	J		4	0	0
Background	P	3	3	0	0
	J		0	0	0

P - Primary
J - Junior

Appendix 2

List A. Representative comments about academic achievement

- He knows his sounds.
- She can use the symbols +, -, =.
- She can read the thermometer.
- He is a very good reader.

List B. Representative comments about effort, attitude, and work habits

- She finds number work tedious and does it very slowly.
- Following instructions is difficult for him.
- Shelley has a mind of her own and if she's not going to do something she's not going to do it.
- He's very eager and anxious to do his work well.

List C. Representative comments about developmental characteristics

- He is very much at the beginning stage of reading.
- She is very much at the manipulative stage of development.
- This work shows a maturity of thinking.
- This child has good eye-hand control.

List D. Representative comments about personal and social characteristics

- . . . very popular girl.
- He likes to draw rather than paint.
- She was shy to tell me about this car.

Appendix 2

List E. Representative comments about students' background

- She's a new Canadian and they don't speak English at home.
- His parents often keep him at home for no apparent reasons.
- All of the children are expected to do very well at school.

List F. Representative comments about the use of information learned from children's daily work

- I see I should check Kerry more often.
- I'll remember that when I talk with her parents.
- She needs so much encouragement.
- This confirms what I already know.

Appendix 3

Table 1 Mean Estimated and Actual Percentages of Correct Estimates

Subject and Division	Mean Estimate (% of items correct)	Mean Actual (% of items correct)	Mean Difference* (Sign Disregarded)
Reading			
Primary	64%	71%	±12%
Junior	65%	62%	± 7%
Both	64%	66%	± 9%
Mathematics			
Primary	66%	61%	±11%
Junior	68%	64%	± 8%
Both	67%	62%	± 9%

*Percentages in this table were computed from the mean percentage of estimated or actual items correct in each class for each category (e.g., Primary Reading).

Appendix 3

Table 2 Ranges of Correlations
Between Estimated and Actual Test Scores

Subject and Division	N	Range of Correlations	Median Correlation	Highest Quartile
Reading				
Primary	18	.44-.90	.75	.82-.90
Junior	18	.22-.90	.67	.72-.90
Both	36	.22-.90	.70	.79-.90
Mathematics				
Primary	18	.07-.85	.58	.72-.85
Junior	18	.00-.87	.58	.79-.87
Both	36	.00-.87	.57	.76-.87

Appendix 3

Table 3 Correlations Between Estimated Reading and Mathematics Scores, and Between Actual Reading and Mathematics Scores for Primary and Junior Teachers Combined

	N	Median Correlation	Range of Correlation	Lowest Quartile	Highest Quartile
Estimated Scores	36	.82	.31-.97	.71	.86
Actual Scores	36	.46	.08-.79	.30	.65

Table 4 Estimates and Actual Percentages Correct Associated With the Largest Underestimates and Overestimates by Area Tested and Grade Level

	Mean Largest Underestimates				Mean Largest Overestimates			
	N	Estimate correct	Actual correct	Difference	N	Estimate correct	Actual correct	Difference
Reading								
Primary	18	47%	82%	-35%	18	70%	51%	19%
Junior	18	47%	72%	-28%	18	75%	46%	29%
Both	36	46%	77%	-31%	36	73%	49%	24%
Mathematics								
Primary	18	50%	71%	-21%	18	78%	47%	31%
Junior	18	47%	72%	-25%	18	74%	45%	29%
Both	36	49%	72%	-23%	36	76%	46%	30%

Table 5 Ranges of Underestimates and Overestimates by Area and Level

	Largest Underestimates Quartile			Largest Overestimates Quartile		
	Estimate/ Actual Scores 25%	Estimate/ Actual Scores 50%	Estimate/ Actual Scores 75%	Estimate/ Actual Scores 25%	Estimate/ Actual Scores 50%	Estimate/ Actual Scores 75%
Reading						
Primary	-25%	-35%	-53%	8%	14%	18%
Junior	-16%	-22%	-29%	15%	20%	35%
Both	-20%	-29%	-41%	12%	17%	27%
Mathematics						
Primary	- 6%	-18%	-31%	19%	33%	39%
Junior	-15%	-20%	-35%	25%	28%	33%
Both	-11%	-19%	-33%	22%	31%	36%

Appendix 4

Table 1 Pupil Participation and Teacher Comments

	Primary	Junior
Total number of pupils enrolled	383	641
Total number of pupils participating	356	538
Percentage of enrolled pupils participating	93	84
Mean percentage of participants on whom teachers commented during estimating exercise (pre-test)	38	25
Mean percentage of participants on whom teachers commented about test results (post-test)	68	66

Table 2 Teacher Comments by Division

	Total Number of Comments Made before the Tests Had Been Given				Total Number of Comments Made after the Tests Had Been Given			
	Primary Teachers	Junior Teachers	Total	%	Primary Teachers	Junior Teachers	Total	%
1. Made no comment	4	3	7	19	0	0	0	0
2. Commented on fewer than one-third of pupils	9	10	19	53	2	2	4	11
3. Commented on from one-third to two-thirds of pupils	3	2	5	14	6	7	13	36
4. Commented on more than two-thirds of pupils	1	2	3	8	3	3	6	17
5. Commented on all pupils	1	1	2	6	7	6	13	36
TOTAL	18	18	36		18	18	36	

Appendix 4

Table 3 Clusters of Pre-Test Comments by Teachers
(Rank ordered by the total number of times mentioned)

	Primary	Junior	Total	%
Effort, Attitude and Work Habits	37	29	66	35
Development	23	23	46	24
Academic Achievement	28	16	44	23
Background	8	15	23	12
Personal-Social	11	1	12	6
TOTAL	107	84	191	

Appendix 4

Table 4 Major Clusters of Teachers' Comments about Estimated and Actual Scores and the Rank Orders of Pupils

	Teachers in Primary Division	Teachers in Junior Division	Total of Post-Test Comments	Total of Pre-Test Comments[1]
A. How estimates were made	27	31	58	
B. Reactions of the rank-order distributions	24	18	42	
C. Comments about the tests	32	16	48	
D. Personal factors affecting pupil performance	197	214	411	___
TOTAL	280	279	559	191

[1]Taken from Table 3.

Table 5 Personal Factors Affecting Pupil Performance on Tests
(Rank ordered according to the total number of post-test comments made)

	Primary	Junior	Total of Post-Test Comments	%	(Total of Pre-Test Comments)[1]	(%)
Effort, Attitude and Work Habits	54	87	141	35	(66)	(35)
Academic Achievement	50	62	121	27	(44)	(23)
Development	50	29	79	19	(46)	(24)
Background	36	27	63	15	(23)	(12)
Personality and Social	7	9	16	4	(12)	(6)
TOTAL	197	214	411		(191)	
Fluctuations in Pupil Performance	30	26	56	-	(-)	(-)

[1]Totals and percentages taken from Table 3.

Appendix 4

Representative Pre-test Comments

List A. Examples of comments about Effort, Attitude, and Work Habits:

- . . . slow--won't finish the text. (P)*
- . . . clock-watcher--doesn't function well during testing; might come through under pressure of these tests. (J)**
- . . . fast worker--may get bored with waiting for others to finish. (P)
- . . . works well in all circumstances. (J)
- . . . may stop working in reading. (P)
- . . . good, hard worker; works well under pressure. (J)
- . . . doesn't work up to her potential--high IQ, but doesn't work. (J)

List B. Examples of comments about Developmental Characteristics:

- . . . high achiever, highly motivated. (P)
- . . . one of the top kids! Good in math and reading. (J)
- . . . tends to be nervous in a testing situation. (J)
- If she has a good day, she may surprise us, but she is very unpredictable. (J)
- . . . apt to do worse than he should because the whole thing may overwhelm him. He's test shy. (J)
- . . . frustrates easily; is not too resourceful; has moved down as work gets harder. (P)

*P - Primary
**J - Junior

Appendix 4

List C. Examples of comments about Academic Achievement

- . . . cannot do reading section--so I'll suggest she colour. (P)*
- . . . a bright one; one that doesn't shine too much--does well in something like this, but if he has to put a lot of preparation into something, he doesn't do well. (J)**
- . . . multiplication not taught yet, therefore, I judged him out of 27. (P)
- Are there a lot of fractions? She won't attempt anything she has no knowledge of. (J)
- fantastic silent reader--can't read orally. Will do well on this test. (P)
- He's reading at a grade 4 level. (J)
- She's in my top group. She'll do well. (P)

List D. Examples of comments about Background

- He is a new Canadian so it's hard to know what he'll do. (P)
- . . . new boy, about one and half months, bright but I don't know him yet. (J)
- . . . heart condition--does everything slowly. There's a difference between what he knows and what he can do. (P)
- He's Chinese. A new Canadian--no English language--no syntax, no word meanings. (J)
- . . . came from Hong Kong in October--bright but doesn't understand English. (P)
- We don't know if he should be grade 4 or grade 5--came from England. He's holding his own in five, I think. (J)

*P - Primary
**J - Junior

Appendix 4

Representative Post-test Comments

List E. Comments about the sources of estimated achievement

i. Day-to-day performance and work habits

- I tried to think of their day-to-day work and tests given in the past. (P)*
- I based my estimates on answers in class to oral and written questions. (J)**
- My estimates were obtained from the pattern of participation they have established throughout the year. The number of times a child gets assigned work right enables the teacher to get to know how the child will do. (P)

ii. Comments about membership in a particular skill group

- I predicted her score according to her group. (P)
- I predicted Angelo in relation to Bessie, Donna, and D'Arcy, a group. (J)
- Laurie, Jason, Frankie, and Joan--they're all in the same reading group. (J)

iii. Comments comparing one pupil's achievement with that of another

- I used Laura as a gauge. (J)
- I estimated them pretty much in comparison with one another. (P)

iv. Comments about performance on teacher-made tests or recent standardized tests

- I based my estimate on what I taught

*P - Primary
**J - Junior

Appendix 4

List E. iv. Comments about performance on teacher-made tests or recent standardized tests (continued)

them and what I think they are capable of doing on their own. I've had little tests with them. (P)*

- These children have been more or less tested three or four times and I've kept a record. (P)

- I based my estimates on a review of the tests--to see how different they were from mine. (J)**

List F. Comments about difficulties in estimating achievement

i. Estimation is a highly individualized process

- I know how she would do by working with her throughout a year and exposing her to various concepts and knowing that she will understand that. (P)

ii. Many factors interact to determine a child's achievement

- In my estimation he is at least average potential. He is very mature in his use of words and sense of humour, but he has difficulty in focussing his attention and getting things on paper. He's a big boy, awkward, motor co-ordination poor. I took it all into consideration and I grossly underestimated him. The tests didn't require much co-ordination. His true, or close to his true, potential came through. (P)

- Michael does not spend as much time in my room in the last while. He's hyper-emotional and we've had a lot of trouble

*P - Primary
**J - Junior

Appendix 4

List F. ii. Many factors interact to determine a child's achievement (continued)

with him and he's going to rehab. class. He's been doing a lot of mechanical-type things to bring up that part of his math. I scored him high because he's not a slow-ability child. But, I guess he missed out on so many of the concept things when he wasn't here. I should have predicted him lower. His reading surprises me because he can read very well and understand really well in class. He does an awful lot of historical type reading and he can explain it accurately--so that it is shocking that he didn't do better. I'd have to study his test--he didn't do the last page. I would have thought he'd do better just from his regular work in class. (J)**

- My math and reading estimates were more or less the same in ranking accuracy. When I see how close they are I don't feel so bad about getting the actual rankings all mixed up. When you start to think of all the things that can affect your judgment . . . Charlene is very neat--though not consciously. It's enough to scare you off ever marking again when you think of all the things that influence you! (P)*

iii. Inability to make estimates

- I don't have any idea, I can't account for that. I can't guess why. (J)

- I just picked numbers out of the air taking into consideration what an average grade 1 could get on the test and went higher and lower from there in terms of what they do for me. (P)

*P - Primary
**J - Junior

Appendix 4

List G. Teachers' comments on the ranking experience

- How I see the children and how they do on a test are two different things. I like to take the child's personality into account. (P)*

- My ranking was much more general even though I was trying to concentrate on reading and math. I think more in terms of language development, the ability to express oneself, and that made a difference in my overall ranking--it wasn't just based on reading skills. (J)**

- I consider much more than reading and math. I looked at their day-to-day work, work habits, performance, the way they work in the program, the results that I see. I don't really do much formal testing. It's on a day-to-day basis. (P)

- I was thinking of all the parts (spelling, social studies) in my original ranking. I would also have preferred to rank the 4s and 5s separately since they are doing a different program. (J)

- My ranking is not too bad. I'm taking the whole child. I'm thinking of day-to-day work. That must be a fairly valid test--it's pretty close to my estimates. (P)

List H. Teachers Express Distrust in Standardized Tests

i. The nature of the tests was completely wrong

- the test is not concrete. We do a lot of work counting things and handling things. I'm surprised they did as well as they did. This test is abstract or semi-abstract. They don't do a lot of paper work in kindergarten--they tell

*P - Primary
**J - Junior

List H. i. The nature of the tests was completely wrong (continued)

us not to. They feel that we should do a lot with the concrete. It's surprising.

ii. Standardized tests must be placed in perspective

- The children can't relate to testing well. Testing bothers them. It tightens up their thoughts. They don't think as well. They get worried and then they can't give their best. That's why tests have to be given consistently--so they get used to them. By observation you can know how they co-operate in class and if you ask them questions and they do them on the blackboard you know they have the ability. The test is another means of finding where the child is at, what his abilities are. Tests aren't everything. There are other means of testing the child.

- I feel the test was a big frustration for everybody concerned--it has not told me many new things about my children. Expecting six and seven year olds to sit down and work alone like this on a piece of paper--I don't believe in it!

List I. Teachers' comments about <u>Effort, Attitude, and Work Habits</u>

- Typically he was fiddling on the test. He wasn't putting much into the time limit. The instruction "to go on to the next one if you don't get it"--maybe he took advantage of this. (P)*

- My most unpopular kid. She works hard but you have to go over her work so many

*p - Primary

Appendix 4

List I. Teachers' comments about Effort, Attitude, and Work Habits (continued)

times with her. I guessed her close on reading. I know she does work on reading, but I know from class that she can't do thinking questions. (J)**

- His work habits are very, very poor and he has great difficulty working on paper--but he scored high which means he basically knows the concepts. (P)*
- Kevin is very erratic in his work. He could get very high or very low. (J)
- He's very slow. If given time, he can do nearly perfect work. (P)
- She's pretty slow but she works hard and is independent. Doesn't look for someone to help her. That helped her here. (J)
- She will work quickly to finish--made errors she shouldn't have. (P)
- The test does not give many examples of different types of mechanics. Paul may have become confused as he often does in class when he has been working for a long time with one operation. (J)

List J. Comments about sources of teachers' understanding of Academic Achievement

- He's a good worker and he's already doing grade 3 work--I have worked with him on skills. (P)
- He's bright! I just figured he would do well never knowing that I would hit it

*P - Primary
**J - Junior

Appendix 4

List J. Comments about sources of teachers' understanding of Academic Achievement (continued)

as close--but that math! I'm really surprised that he got that high because in groups he's not as quick as others to grasp concepts--so he must have retained a lot of what we've done. (J)**

- I'm surprised at her math because she's usually good in her math and she should have scored higher. In reading she has just now picked up a great, great deal. Just prior to the test she was specifically working on a great deal of phonics work because she was ready. She's slated for reading clinic and would benefit a great deal. She's progressing quite well at the moment--but remember this is a grade 1 test and she's in grade 2. It's a good thing she scored this high! (P)*

- The type of girl who has the ability but won't apply herself. This is what her former teacher was telling me last year. She was quite good but fidgety . . . can basically do the test well but it depends on how she feels. (P)

- Her math mark is low and that is right where it should be. She just hasn't got anything there to work with. (J)

- She does know her word attack skills, but her comprehension is poor. (P)

- I was really out on that one! He goes to withdrawal reading every day and is being considered for the learning centre and he's in my bottom reading group. I can't see why he would do so much better

*P - Primary
**J - Junior

Appendix 4

List J. Comments about sources of teachers' understanding of Acacemic Achievement (continued)

because although he's very witty, I find him academically dull. (J)**

List K. Teachers' comments about Developmental Characteristics of pupils suggesting what individual performance is often affected by extraneous circumstances

- I'd have to check the results. Sometimes when she sits beside some girls she gets flighty and upset. (P)*

- She has a low opinion of herself. She has a bright sister and expects that she will do low by comparison. (J)

- I'm surprised he did that well. He was upset during the test by another child's crying. (P)

- He was placed in a grade 2 and then placed in my grade 1 class later in the year. He had become very frustrated in grade 2. He was not ready. He gets nervous under pressure--wets his pants. I thought the same thing would happen here. I have been working on building up his confidence.

- Did better in math than I thought he would--his handwork is so terrible that he makes mistakes just trying to transcribe numbers from one piece of paper to the next. He has great potential, but he doesn't do anything with it except drive me nuts. (J)

- That's very poor for Donna. She could have been upset by things going on that week--like her dance recital and her piano examination. She's a very

*P - Primary
**J - Junior

Appendix 4

List K. Teachers' comment about Developmental Characteristics of pupils suggesting that individual performance is often affected by extraneous circumstances (continued)

bright girl and for her to fall that far there had to be something else bothering her. (J)**

- I don't understand math. He's excellent in math. It must have been the pressure of the test situation. (J)

- This boy is very slow. I expected him to crack under the time pressure, but he did well. He's constantly on phenobarb. (P)*

- Surprising! She would be upset because she is concerned about her younger brother who is in special education who is always being tested. She may be test-shy as a result. (J)

List L. Teachers' comments on pupils' Background

- Tommy's a New Canadian. He may have had trouble marking the actual circles. He must have been terribly busy looking around to try to find the answers. He is a child who is very easily distracted and he often needs things to be explained to him two or three times. To understand and follow directions is foreign to him because he is not used to obeying or listening at home. (P)

- She's new to the class and she's been away a lot. Her mother just died and household chores have fallen on her shoulders. (J)

*P - Primary
**J - Junior

Appendix 4

List L. Teachers' comments on pupils' Background (continued)

- He started the year doing well. Then there were hints of home problems. His mother went away. The problems are continuing. He doesn't seem to have a stable base at home--he is really going "down the tubes." He had good promise. (P)*

- Rick's home life is not too good. He is the shining light in the family. He has a culturally deprived background. On that basis I ranked him low. On general information he is low. There are a lot of things that came up in class that the rest of the kids know but Rick doesn't--lack of things going on at home. His parents are struggling. So I didn't expect much. (J)**

- He works hard, but he's a New Canadian. It's hard to know what he's going to do because you don't know if he understands. He's so quiet he doesn't ask questions. (J)

- I know that she doesn't know her numbers--I've tested her. But her father tore her report card--it wasn't a bad report card--it was fairly favourable. I always put the bad comments on areas I feel the children could improve on: her number work was low, she didn't know her shapes and sizes--things like that. But these things make a terrible impression on the child--if you are low anyway and I'm not saying that she is. (P)

- Here is our little Anita! She is about a year ahead of other children--great vocabulary. She can read; takes out library books. She thinks and reasons. I know from talking to her. What her parents say usually comes first. Her

*P - Primary
**J - Junior

Appendix 4

List L. Teachers' comments on pupils' Background (continued)

dad's a vet down at the clinic, her mother was a teacher--they work with her. I don't think they actually taught her to read--I think she taught herself. (P)*

List M. Teachers' comments about Fluctuations in Pupil Performance

- She's a child who is very hard to predict. I could imagine if she had done this test on a different day she could have scored much less. Her whole attitude towards her work depends on how she feels. Yesterday she did nothing and a test on that day would turn out worse. Today she is working very well. She's a child who is very easily distracted by her own feelings. When she wrote that test, she obviously had a good day. (P)

- A very big surprise. A lot of behavioural problems here. The boy fluctuates between extreme carelessness and extreme perfectionism. I'd like to see him re-tested--I think he would do better. (J)**

- I said that he would be very frustrated and he really was. He had a very, very bad day. (P)

- Usually her math is good. I'm surprised at this. She can become quickly uninterested--will get bored, difficult to please--is up and down. (P)

- This reflects his current trend. He's been dropping a lot in the last three weeks and I don't know why he is slipping. The slip has been getting worse since December. I think he is facing a lot

*P - Primary
**J - Junior

Appendix 4

List M. Teachers' comments about Fluctuations in Pupil Performance (continued)

of problems but I have no idea what they might be. (J)**

- He did well at the beginning of the year but he has been going down lately. He has problems with division which we are working on now. (J)

- I'm sure he'd do worse than that today in math. His math brain has gone on vacation. (J)

- I don't know if I like her or not. A weird kid--really tough side! Mopey and whiney, next minute flying around the room on top of it. Hard to know how she'll test out--so moody and changeable. (P)*

*P - Primary
**J - Junior

Appendix 5

APPENDIX 5

Responses to Questions on
Important Sources of Information

	VISIT 1*			TOTAL		
	1st Choice	2nd Choice	3rd Choice	Visit 1	Visit 3†	Visit 6‡
Own Observations	14	4	1	19	21	12
Child-Teacher Interaction	6	5	2	13	16	3
Previous Teachers	0	1	3	4	5	1
Parents	1	4	1	7	12	2
Child-Child Interaction	1	0	2	3		
Testing, Written and Oral	4	2	0	6	22	14
Daily Work	4	6	2	12	23	29
Auxillary Services	0	1	1	2		
Art Work	0	1	0	1		
Teacher's Personal Feelings, Intuition	1	0	0	1		2
Concept Attainment and Retention	1	0	0	1		

*Visit 1: From the sources of information you have mentioned, which do you feel is most important and helpful to you in learning about your children?

†Visit 3: What are the most important ways you get to know about individual pupil achievement?

‡Visit 6: What is your most important source of information for assessing student achievement?